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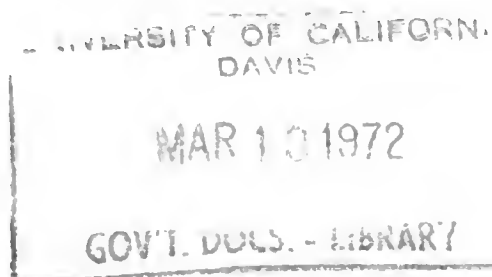
Department of Water Resources

BULLETIN No. 130-70

# HYDROLOGIC DATA: 1970

Volume I: NORTH COASTAL AREA

DECEMBER 1971



NORMAN B. LIVERMORE, JR.  
Secretary for Resources  
The Resources Agency

RONALD REAGAN  
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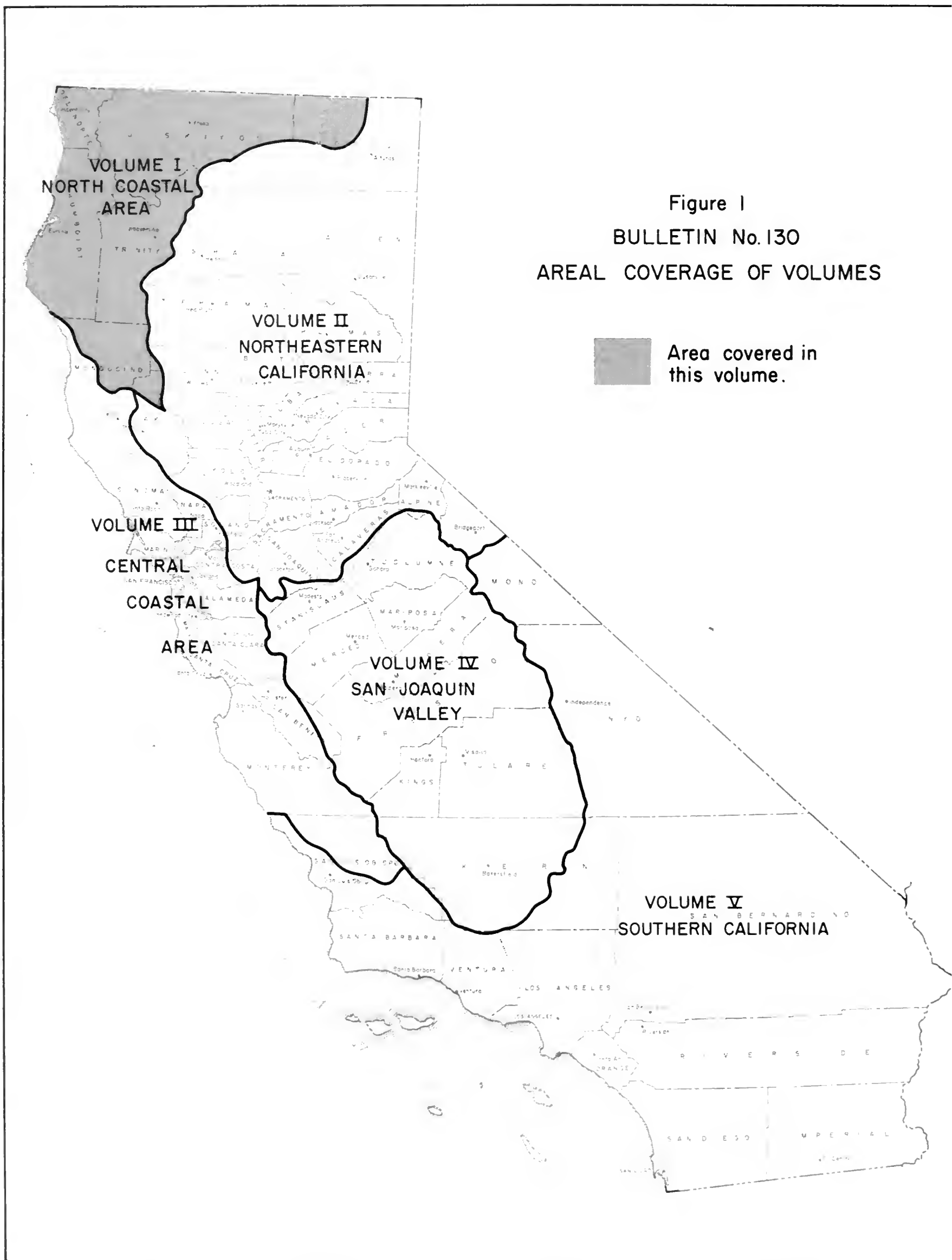
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DECEMBER 1971

NORMAN B. LIVERMORE, JR.  
*Secretary for Resources*  
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*Governor*  
State of California

WILLIAM R. GIANELLI  
*Director*  
Department of Water Resources



## FOREWORD

The hydrologic data programs of the Department of Water Resources supplement the data collection activities of other agencies and help satisfy needs of these agencies for data on the quality and quantity of water in the State. Bulletin No. 130-70 presents accurate, comprehensive, and timely hydrologic data which provide a more complete knowledge of the factors affecting our environment and are prerequisites for effective planning, design, construction, and operation of water facilities.

The Bulletin No. 130 series is published annually in five volumes. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map on the opposite page.

*William R. Gianelli*

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William R. Gianelli, Director  
Department of Water Resources  
The Resources Agency  
State of California  
November 8, 1971

# METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT	
Inch (in.)	2.54	Centimeters
Foot (ft.)	0.3048	Meter
Mile (mi.)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal.)	3.785	Liters
Acre-foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liter per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute
Part per million (ppm)	Milligram per liter (mg/l)	
Part per billion (ppb)	Microgram per liter (ug/l)	
Part per trillion (ppt)	Nanogram per liter (ng/l)	
Equivalent per million (epm)	Milliequivalent per liter (me/l)	
Degrees Fahrenheit (°F)	Degrees Celsius or Degrees Centigrade (°C) = (°F - 32°) 5/9	

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## ABSTRACT

The report contains tables showing data on climate, surface water flow, ground water levels, and surface and ground water quality in the North Coastal area during the 1969-70 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

## ACKNOWLEDGMENTS

In the preparation of this report, valuable assistance and contributions were received from several public agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the North Coastal area.

State of California  
The Resources Agency  
DEPARTMENT OF WATER RESOURCES

RONALD REAGAN, Governor  
NORMAN B. LIVERMORE, JR., Secretary for Resources  
WILLIAM R. GIANELLI, Director, Department of Water Resources  
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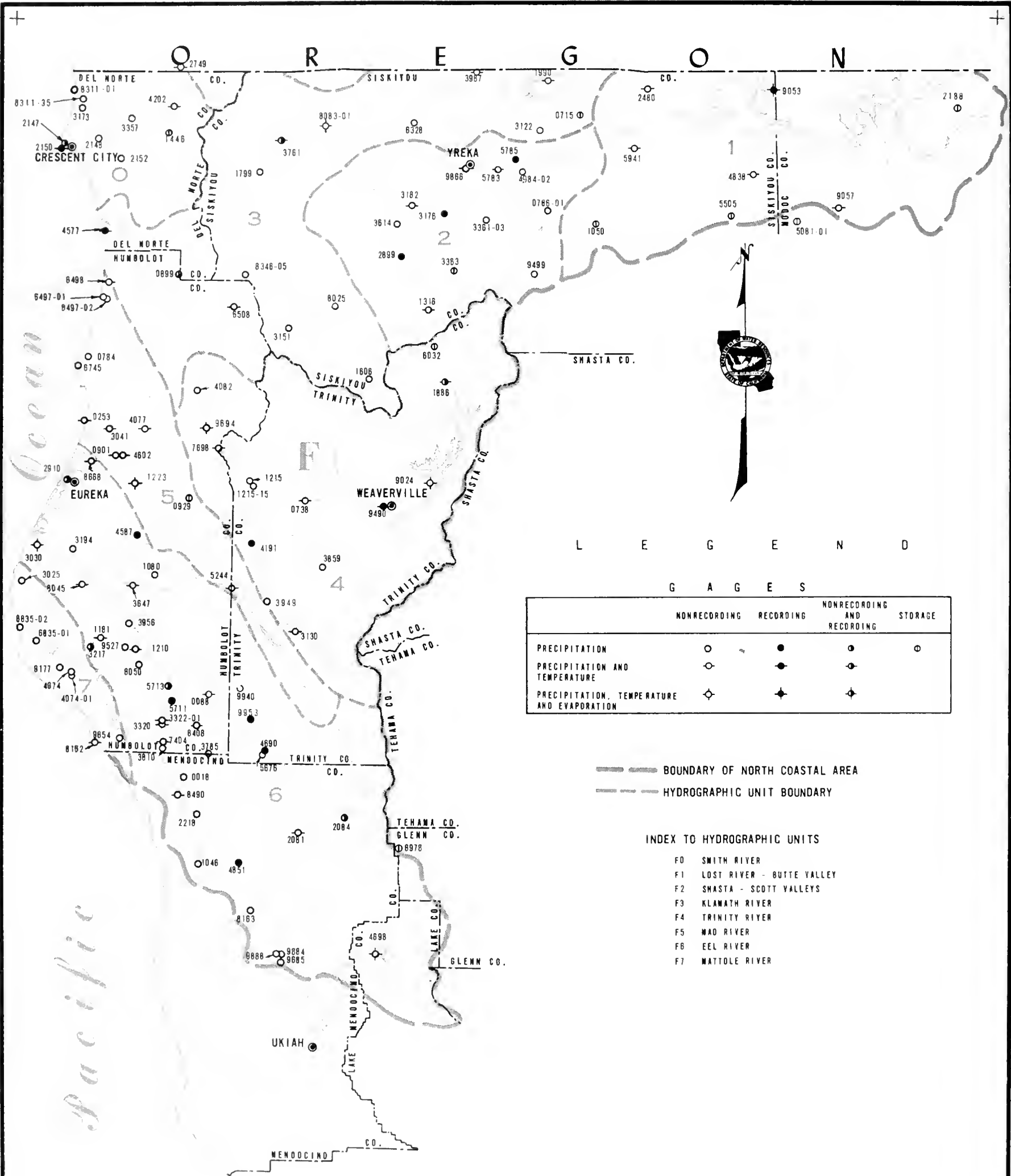
Activities covered by this report were under the supervision  
of

Robert F. Middleton, Jr. . Chief, Surface Water & Flood Control Section

Assisted by

Linwood L. Bates - Red Bluff Office . . . . W. R. Engineering Associate  
Walter D. McIntyre - Sutter Field Office . W. R. Engineering Associate  
John M. Miller - Climatological Data . . . . . W. R. Technician II  
Charles G. Hodge - Surface Water Measurements . . . W. R. Technician II  
Seth K. Barrett - Ground Water Measurements . . . . W. R. Technician II  
Lee R. Gibson - Water Quality . . . . . W. R. Technician II

Reviewed and coordinated by  
Division of Resources Development  
Environmental Quality Branch  
Water Resources Evaluation Section



CLIMATOLOGICAL OBSERVATION STATIONS



APPENDIX A  
CLIMATOLOGICAL DATA

This appendix summarizes monthly precipitation, wind movement, and evaporation data for the North Coastal area from July 1, 1969, to September 30, 1970. Storage gage data are reported as annual precipitation. The appendix contains all weather data collected by cooperating agencies and local observers at 121 stations, with the exception of the observed air temperature data.

Daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

To insure accuracy, stations are normally inspected either semi-annually or annually to see that the equipment is properly maintained and that observations are generally taken in accordance with National Weather Service standards.

Each station in this appendix has been assigned an identification number. The letter and first digit denote the drainage basin as shown below. The remaining digits denote the alphabetical sequence of the station.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

# TABLE A-1 INDEX OF CLIMATOLOGICAL STATIONS

An explanation of the column headings and code symbols follows:

40-Acre Tract - This denotes the location of the station within the section in which it is located. The letter code is derived from the diagram to the right.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Base and Meridian - The code for this column is as follows:

- H - Humboldt Base and Meridian
- M - Mount Diablo Base and Meridian

Cooperator Number - This number is assigned from the following list:

- 000 Private Cooperators
- 006 Northwestern Pacific Railroad
- 007 California-Oregon Power Company (COPCO)
- 804 California Department of Parks and Recreation
- 808 California Division of Forestry
- 809 California Division of Highways
- 900 National Weather Service (Climatological Data)
- 901 Corps of Engineers, San Francisco District
- 903 Corps of Engineers, Sacramento
- 905 U. S. Forest Service
- 907 State Climatologist

Cooperator's Index Number - This is the number assigned to the station by the agency responsible for, or handling the records of, the station. The National Weather Service number is only shown in this column when it differs from the alpha order number.

County - This is a standard code for California counties; those counties used in this appendix are shown below:

<u>County</u>	
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

TABLE A-1

## INDEX OF CLIMATOLOGICAL STATIONS FOR 1969-70

## NORTH COASTAL AREA

Station		Elevation (in Feet)	Section	Township	Range	40-Acre Tract Base & Meridian	Latitude			Longitude			Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
Number	Name						O	I	II	O	I	II						
F6 0018	ADANAC LODGE	1100	SEC 14	T23N	R17W	H M 39	50	48	123	42	00	000			1950			23
F6 0088	ALDERPOINT	435	SEC 27	T03S	R05E	H 40	11	00	123	36	00	900			1940			12
F5 0253	ARCATA A P	217	SEC 19	T07N	R01E	Q H 40	58	18	124	05	24	000			1957			12
F3 0715	BESWICK 7 S	6140	SEC 33	T47N	R03W	M 41	52	00	122	14	00	900			1952			47
F4 0738	BIG BAR RANGER STA	1270	SEC 05	T33N	R12W	M 40	44	54	123	14	42	900			1943			53
F5 0764	BIG LAGOON	100	SEC 18	T09N	R01E	R H 41	09	36	124	05	54	000	PN2125		1947			12
F2 0786-01	BIG SPRINGS 4 E	2955	SEC 05	T43N	R04W	R M 41	35	30	122	19	42	000			1960			47
F3 0899	BLUE CREEK MTN LO	4870	SEC 30	T12N	R04E	R H 41	23	42	123	45	54	900			1960			08
F5 0901	BLUE LAKE	105	SEC 30	T06N	R02E	A H 40	52	54	123	59	12	000			1951			12
F4 0929	BOARD CAMP MTN	4500	SEC 26	T04N	R04E	M H 40	42	12	123	42	00	000			1963			12
F6 1046	BRANSCOMB 2 NW	1480	SEC 09	T21N	R16W	M M 39	41	12	123	39	36	900			1959			23
F1 1050	BRAY 10 WSW	5759	SEC 24	T43N	R03W	M 41	34	00	122	08	00	900			1951			47
F6 1080	BRIDGEVILLE 4 NNW	2050	SEC 27	T02N	R03E	H 40	31	00	123	49	00	900			1954			12
F6 1181	BULL CREEK	410	SEC 36	T01S	R01E	H H 40	21	00	124	06	30	000			1960			12
F6 1210	BURLINGTON ST PARK	200	SEC 12	T02S	R02E	D H 40	18	30	123	54	24	000			1950			12
F4 1215	BURNT RANCH 1S	2150	SEC 23	T05N	R06E	E H 40	47	48	123	28	48	900			1945			53
F4 1215-15	BURNT RANCH HMS	1500	SEC 14	T05N	R06E	F H 40	48	30	123	28	30	000			1963			53
F5 1223	BUTLER VALLEY RCH	420	SEC 36	T05N	R02E	H 40	46		123	54		900			1970			12
F2 1316	CALLAHAN RANGER STA	3136	SEC 21	T40N	R08W	M 41	18	00	122	48	00	900			1943			47
F0 1446	CAMP SIX LOOKOUT	3700	SEC 31	T17N	R03E	B M 41	49	48	123	52	24	000			1963			08
F3 1606	CECILVILLE 5 SE	2980	SEC 12	T37N	R11W	M 41	06	00	123	03	00	900			1954			47
F3 1799	CLEAR CREEK	975	SEC 07	T15N	R07E	H H 41	42	30	123	26	54	900			1959			47
F4 1886	COFFEE CREEK RS	2500	SEC 06	T37N	R07W	M 41	05		122	42		900			1960			53
F3 1990	COPCO DAM NO 1	2700	SEC 29	T48N	R04W	P M 41	59	00	122	20	00	900			1928			47
F6 2081	COVELO	1385	SEC 12	T22N	R13W	M 39	47	00	123	15	00	900			1921			23
F6 2084	COVELO EEL RIVER RS	1514	SEC 23	T23N	R11W	M 39	50	00	123	05	00	900			1940			23
F0 2147	CRESCENT CITY 1N	40	SEC 20	T16N	R01W	H 41	46	00	124	12	00	900			1885			08
F0 2148	CRESCENT CITY 7 ENE	120	SEC 08	T16N	R01E	H 41	48	00	124	05	00	900			1913			08
F0 2150	CRESCENT CITY HMS	50	SEC 20	T16N	R01W	H 41	46	00	124	12	00	900			1941			08
F0 2152	CRESCENT CITY 11 E	360	SEC 30	T16N	R02E	B H 41	45	15	123	59	30	000			1947			08
F1 2188	CROWDER FLAT	5175	SEC 20	T47N	R11E	K M 41	53	00	120	44	00	000	PN2188		1953			25
F6 2218	CUMMINGS	1270	SEC 21	T23N	R16W	M 39	50	00	123	38	00	900			1927			23
F1 2480	DORRIS INSPECT STA	4240	SEC 36	T48N	R01W	R M 41	57	13	121	54	30	000			1959			47
F0 2749	ELK VALLEY	1711	SEC 34	T19N	R04E	H 42	00	00	123	43	00	900			1938			08
F2 2899	ETNA	2912	SEC 28	T42N	R09W	M 41	28	00	122	54	00	900			1935			47
F6 2910	EUREKA WB CITY	43	SEC 22	T05N	R01W	H 40	48		124	10		900			1878			12
F7 3025	FERNDAL 8 SSW	1445	SEC 06	T01N	R02W	P H 40	29	30	124	20	24	900			1959			12
F6 3030	FERNDAL 2NW	10	SEC 34	T03N	R02W	K H 40	35	54	124	16	36	900			1963			12
F5 3041	FIELD BROOK 4 D RCH	285	SEC 36	T07N	R01E	P H 40	56	36	124	01	06	000			1956			12
F3 3122	FOOTHILL SCHOOL	2960	SEC 25	T46N	R05W	F M 41	48	42	122	22	13	000			1962			47
F4 3130	FOREST GLEN	2340	SEC 22	T01S	R08E	H 40	23	00	123	20	00	900			1930			53
F3 3151	FORKS OF SALMON	1270	SEC 24	T10N	R07E	A H 41	15	12	123	19	00	900			1959			47
F0 3173	FORT DICK	46	SEC 14	T17N	R01W	H 41	52	00	124	09	00	900			1951			08
F2 3176	FORT JONES 6 ESE	3324	SEC 12	T43N	R08W	M 41	35	00	122	43	00	900			1941			47
F2 3182	FORT JONES RANGER STA	2720	SEC 02	T43N	R09W	C M 41	36	00	122	51	00	900			1936			47
F6 3194	FORTUNA	60	SEC 35	T03N	R01W	Q H 40	36	00	124	09	00	000			1955			12
F6 3217	FOX CAMP	2500	SEC 09	T02S	R01E	R H 40	18	24	124	03	54	804			1960			12
F6 3320	GARBERVILLE	340	SEC 24	T04S	R03E	H 40	06	00	123	48	00	900			1938			12
F6 3322-01	GARVERVILLE HMS	540	SEC 24	T04S	R03E	G H 40	06	00	123	47	40	809			1935			12
F0 3357	GASQUET RANGER STA	384	SEC 21	T17N	R02E	N H 41	52	00	123	58	00	900			1940			08
F2 3361-03	GAZELLE - EPPERSON	2760	SEC 17	T43N	R06W	J M 41	34	13	122	33	12	000			1950			47
F2 3363	GAZELLE LOOKOUT	5200	SEC 08	T41N	R07W	J M 41	24	30	122	40	30	000			1956			47
F2 3614	GREENVIEW	2818	SEC 29	T43N	R09W	M 41	33	00	122	54	00	900			1943			47
F6 3647	GRIZZLY CRK REDWOOD	500	SEC 11	T01N	R02E	H 40	29	00	123	47	00	900			1963			12
F3 3761	HAPPY CAMP RANGER STA	1090	SEC 11	T16N	R07E	H 41	48	00	123	23	00	900			1914			47
F6 3785	HARRIS 7 SSE	1910	SEC 27	T05S	R05E	N H 39	59	24	123	36	42	000			1953			23
F4 3859	HAYFORK RANGER STA	2340	SEC 12	T31N	R12W	R M 40	33	00	123	10	00	900			1915			53
F4 3949	HIDDEN VALLEY RANCH	1978	SEC 32	T01N	R07E	M H 40	24	54	123	24	30	000			1959	1967		53
F6 3956	HIGH ROCK	900	SEC 15	T01S	R02E	K H 40	22	48	123	56	30	808			1960			12
F3 3987	HILTS	2900	SEC 23	T48N	R07W	M 42	00	00	122	38	00	900			1939			47
F7 4074	HONEYDEW 2 WSW	380	SEC 02	T03S	R01W	C H 40	14	18	124	09	00	900			1953			12
F7 4074-01	HONEYDEW HUNTER	380	SEC 02	T03S	R01W	M H 40	14	18	124	09	06	000			1955			12
F5 4077	HONOR CAMP 42	1875	SEC 31	T07N	R03E	K H 40	56	48	123	52	42	000			1956			12
F4 4082	HOOPA	350	SEC 25	T08N	R04E	H 41	03	00	123	40	00	900			1941			12
F4 4191	HYAMPOM	1260	SEC 25	T03N	R06E	H 40	37	00	123	28	00	900			1940			53
F0 4202	IDLEWILD HMS	1250	SEC 06	T17N	R04E	D H 41	54	00	123	46	12	900			1946			08
F3 4577	KLAMATH	25	SEC 15	T13N	R01E	H 41	31	00	124	02	00	900			1941			08
F6 4587	KNEELAND 10 SSE	2356	SEC 13	T03N	R02E	H 40	33	00	123	54	00	900			1954			12
F5 4602	KORBEL	150	SEC 28	T06N	R02E	P H 40	52	00	123	57	30	900			1937			12
F6 4690	LAKE MOUNTAIN		SEC 21	T05S	R07E	H 40	01	00	123	24	00	900			1939	1969		53

TABLE A-1 (CONTINUED)  
INDEX OF CLIMATOLOGICAL STATIONS FOR 1969-70  
NORTH COASTAL AREA

Station		Elevation (in Feet)	Section	Township	Range	40-Acre Tract Base & Meridian	Latitude			Longitude			Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
Number	Name						O	I	II	O	I	II						
F6 4698	LAKE PILLSBURY NO 2	1740	SEC 10	T18N	R10W	M	39	25		122	59		900		1964	1970		17
F1 4838	LAVA BEDS NAT MON	4770	SEC 28	T45N	R04E	H	41	43	48	121	30	30	900		1940		06	47
F6 4851	LAYTONVILLE	1640	SEC 01	T21N	R15W	M	39	42	00	123	29	00	900		1940			23
F2 4984-02	LITTLE SHASTA	2725	SEC 26	T45N	R05W	C	41	43	00	122	23	00	000		1960			47
F1 5081-01	LONG BELL STATION	4375	SEC 20	T42N	R05E	B	41	28	00	121	25	00	000		1958			25
F5 5244	MAD RIVER RANGER STA	2775	SEC 17	T01N	R06E	H	40	27	00	123	32	00	900		1943			53
F1 5505	MEDICINE LAKE	6660	SEC 10	T43N	R03E	M	41	35	00	121	37	00	900		1946			47
F6 5676	MENA 3 NW	2875	SEC 28	T05S	R07E	A	40	00	06	123	23	30	000		1927			53
F6 5711	MIRANDA 4 SE	263	SEC 30	T03S	R04E	H	40	11	00	123	47	00	900		1964			12
F6 5713	MIRANDA SPENGLER RCH	400	SEC 19	T03S	R04E	H	40	12		123	46		900		1939			12
F2 5733	MONTAGUE	2500	SEC 27	T45N	R06W	Q	41	43	42	122	31	36	000	045733	1888		05	47
F2 5785	MONTAGUE 3 E	2640	SEC 18	T45N	R05W	M	41	45	00	122	23	00	900		1943			47
F1 5941	MOUNT HEBRON R S	4250	SEC 32	T46N	R01W	M	41	47	00	122	00	00	900		1942			47
F4 6032	MUMBO BASIN	5700	SEC 35	T39N	R06W	E	41	12	00	122	32	00	900		1946			53
F6 6050	MYERS FLAT	190	SEC 30	T02S	R03E	H	40	15	40	123	52	00	000		1950			12
F3 6328	OAK KNOLL RANGER STA	1963	SEC 12	T46N	R09W	M	41	50	00	122	51	00	900		1942			47
F6 6408	OLD HARRIS	2225	SEC 30	T04S	R05E	G	40	05	00	123	39	42	000		1956			12
F5 6497-01	ORICK 3 NWE	50	SEC 22	T11N	R01E	K	41	19	24	124	02	30	000		1950			12
F5 6497-02	ORICK ARCATA REDWOOD	75	SEC 22	T11N	R01E	K	41	19	24	124	02	36	000		1954			12
F5 6498	ORICK PRAIRIE CREEK	161	SEC 02	T11N	R01E	H	41	22	00	124	01	00	900		1937			12
F3 6508	ORLEANS	403	SEC 31	T11N	R06E	H	41	18	00	123	32	00	900		1885			12
F5 6745	PATRICKS PT ST PARK	250	SEC 26	T09N	R01W	L	41	08	12	124	09	00	804		1947			12
F7 6835-01	PETROLIA	175	SEC 03	T02S	R02W	L	40	19	30	124	16	48	000		1958			12
F7 6835-02	PETROLIA 4 NW	900	SEC 19	T01S	R02W	D	40	22	24	124	18	30	000		1953			12
F6 6976	PLASKETT	6580	SEC 27	T22N	R09W	A	39	44	12	122	51	24	000		1960			11
F6 7404	RICHARDSON GROVE	500	SEC 13	T05S	R03E	H	40	02		123	47		900		1961			12
F3 8025	SAWYERS BAR R S	2169	SEC 20	T40N	R11W	M	41	18	00	123	08	00	900		1931			47
F6 8045	SCOTIA	139	SEC 07	T01N	R01E	H	40	29	00	124	06	00	900		1926			12
F3 8083-01	SEIAD VALLEY R S	1371	SEC 11	T46N	R12W	R	41	50	36	123	11	42	905		1953			47
F7 8162	SHELTER COVE	55	SEC 16	T05S	R01E	H	40	02		124	04		900		1959			12
F6 8163	SHERWOOD VALLEY	2170	SEC 32	T20N	R14W	F	39	32	36	123	26	30	901		1958			23
F0 8311-01	SMITH RIVER 2 WNW	195	SEC 21	T18N	R01W	A	41	56	30	124	10	42	000		1951	1969		08
F0 8311-35	SMITH RIVER	55	SEC 26	T18N	R01W	H	41	55		124	08		000		1970			08
F3 8346-05	SOMESBAR UKONOM R S	727	SEC 33	T12N	R06E	H	41	23	00	123	28	00	905	PH8919	1965			12
F6 8490	STANDISH HICKEY PARK	850	SEC 03	T23N	R17W	F	39	52	30	123	43	30	900		1949			23
F6 8663	SUNNY BRAE	70	SEC 33	T06N	R01E	H	40	52	00	124	04	00	000		1965			12
F4 9024	TRINITY DAM VISTA PT	2500	SEC 16	T34N	R08W	M	40	48	00	122	46	00	900		1959			53
F1 9053	TULELAKE	4035	SEC 06	T47N	R05E	M	41	58	00	121	23	00	900		1932			47
F1 9057	TULELAKE INSP STA	4408	SEC 31	T44N	R07E	F	41	36		121	12		000	049057	1953	1969		25
F7 9177	UPPER MATTOLE	255	SEC 33	T02S	R01W	H	40	15	00	124	11	00	900		1886			12
F4 9490	WEAVERVILLE RANGER S	2050	SEC 12	T33N	R10W	M	40	44	00	122	56	00	900		1869			53
F2 9499	WEED FD	3593	SEC 01	T41N	R05W	M	41	26	00	122	23	00	900		1957			47
F6 9527	WEOTT 2 SE	600	SEC 12	T02S	R02E	H	40	18	29	123	53	40	000		1961			12
F7 9654	WHITEHORV	1050	SEC 15	T05S	R02E	E	40	01	18	123	56	12	000		1962			12
F6 9684	WILLITS 1 NE	1350	SEC 17	T18N	R13W	M	39	25	00	123	21		900		1950			23
F6 9685	WILLITS HOWARD RS	1925	SEC 05	T17N	R13W	M	39	21	00	123	19	00	900		1935			23
F6 9686	WILLITS NW PAC RR	1365	SEC 18	T18N	R13W	L	39	24	12	123	21	06	006		1911		05	23
F4 9694	WILLOW CREEK 1 NW	461	SEC 29	T07N	R05E	H	40	57		123	33		900		1968			53
F2 9866	YREKA	2631	SEC 27	T45N	R07W	M	41	43	00	122	38	00	900		1871			47
F6 9940	ZENIA 1 SSE	2880	SEC 22	T03S	R06E	G	40	11	18	123	28	54	000		1950			53
F6 9953	ZENIA-KEETTEMOM STORE	3600	SEC 35	T03S	R06E	H	40	10		123	27		900		1969			53

TABLE A-2  
PRECIPITATION DATA  
NORTH COASTAL AREA

Station Name	Precipitation in inches																Total Oct.1 To Sept.30
	Total July 1 To June 30	1969						1970									
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
NORTH COASTAL AREA																	
SMITH RIVER																	
CRESCENT CITY 1 N	66.23	.07	.05	3.08	6.52	5.25	14.10	20.90	4.52	4.68	2.98	2.91	1.17	.02	.02	.46	63.53
CRESCENT CITY 7 ENE	87.90	.05	.04	3.99	6.74	5.74	20.92	29.52	5.23	6.27	4.69	3.36	1.35	.00	.00	.51	84.33
CRESCENT CITY H.M.S.	63.38	.00	.00	2.83	6.03	5.03	14.38	18.79	4.72	3.98	3.87	2.72	1.03	.00	.00	.36	60.91
CRESCENT CITY 11 E	109.89	.04	T	3.56	7.33	6.48	25.96	43.36	6.87	6.77	4.93	3.56	1.03	.00	.00	.36	106.65
ELK VALLEY	---	T	T	--	--	--	---	---	--	--	--	1.99	.53	.00	.00	.33	---
PORT DICK	77.26	T	.05	4.45	7.33	5.39	17.01	23.22	4.19	6.21	4.21	3.54	1.66	T	.02	.62	73.40
GASQUET RANGER STATION	93.46	.04	.03	3.25	6.60	5.25	21.61	35.35	5.93	5.79	4.58	3.56	1.47	.00	.00	.69	90.83
IDLEWILD H.M.S.	82.80	.00	.00	1.86	6.16	3.60	20.96	31.96	4.55	5.90	4.75	2.38	.68	.00	.00	.17	81.11
SMITH RIVER 2 WNW	---	.00	.04	4.75	7.86	5.67	RE										---
SMITH RIVER	---										RB	3.79	1.65	.00	T	.59	---
LOST RIVER - BUTTE VALLEY																	
DORRIS INSPECTION STA	14.65	.23	.00	.26	1.99	.65	4.11	4.02	.55	1.11	.41	.57	.75	.21	.00	.04	14.41
LAVA BEDS NAT'L MON	16.53	.07	.00	.01	1.42	.61	3.68	2.97	.74	2.55	.69	1.13	2.66	.00	.05	.02	16.52
MT HEERON RANGER STA	14.09	.33	.00	.17	1.58	.59	3.48	3.87	.66	1.27	.45	.24	1.45	.01	.00	.00	13.60
TULELAKE	12.25	.28	.00	.04	1.99	.53	3.60	2.45	.40	1.57	.39	.42	.58	.00	.03	.18	12.14
TULELAKE INSPECTION STA	---	.11	.00	RE													---
SHASTA - SCOTT VALLEYS																	
BIG SPRINGS 4 E	11.66	.17	.00	.20	1.16	.87	3.20	2.93	.33	1.28	.42	.30	.80	.00	.00	.11	11.40
CALLAHAN RANGER STA	23.91	.04	.00	.16	1.04	.85	8.04	8.27	1.86	.73	1.14	.31	1.47	.13	.00	.08	23.92
ETNA	---	1.39	.00	.22	1.71	1.38	---	---	2.34	.91	---	---	---	.00	.00	.01	---
PORT JONES 6 ESE	25.6	.2	.0	.3	1.5	.7	8.1	9.4	2.2	1.0	.9	.7	.6	.0	.0	.1	25.2
PORT JONES RANGER STA	27.30	.53	.00	.24	1.45	.55	8.82	10.44	2.28	.99	.65	.37	.98	.41	.00	.09	27.03
GAZELLE EPPERSON	15.22	1.37	.00	.19	.99	.26	4.10	5.73	.39	1.55	.26	.17	.21	.30	.00	.04	14.00
GREENVIEW	21.46	.25	.00	.33	.32	.08	7.06	10.60	2.00	.25	.44	.04	.09	.00	.00	.06	20.94
LITTLE SHASTA	17.12	2.08	.00	.25	1.66	.75	4.03	4.95	.54	1.65	.49	.50	.22	.11	.00	.00	14.90
MONTAGUE	14.56	.27	.00	.10	1.24	.26	5.06	4.86	.56	1.39	.16	.32	.34	.20	.00	.17	14.56
MONTAGUE 3 E	---	.95	.00	--	--	.28	---	4.99	1.28	.59	--	--	--	.00	.00	.00	---
WEED FIRE DEPARTMENT	25.14	.16	.00	.25	1.14	2.12	9.29	8.04	1.98	.89	1.02	.03	.49	.00	.00	.08	25.08
YREKA	22.09	.05	.00	.15	1.25	.66	7.87	8.01	.90	1.75	.21	.14	1.10	1.99	.00	.02	23.90
KLAMATH RIVER																	
CECILVILLE 5 SE	44.21	.14	.00	.31	2.59	1.36	14.79	17.74	2.73	1.99	1.13	.71	.72	.00	.00	.06	43.84
CLAR CREEK	67.77	1.10	.00	.61	5.12	2.00	18.37	28.61	4.67	3.91	2.32	.99	.07	.00	.00	.07	66.13
COPCO DAM NO. 1	22.80	.64	.00	.21	1.68	.98	7.13	6.46	1.52	1.69	.43	.41	1.75	.01	T	.02	21.98
FOOTHILL SCHOOL	19.50	.58	.00	.30	1.65	.63	6.20	5.81	1.48	1.07	.58	.43	.77	.00	.00	.04	18.66
FORKS OF SALMON	---	.22	.00	--	--	--	---	---	--	--	--	--	--	--	--	--	---
HAPPY CAMP RANGER STA	58.98	.82	.00	.46	4.67	1.77	17.38	23.95	4.51	3.15	1.06	.89	.32	.00	.00	.01	57.71
HILTS	24.18	.30	.00	.24	1.41	.74	7.08	9.07	1.08	2.24	.45	.09	1.48	.11	.00	.08	23.83
KIAMATH	83.04	T	T	2.50	7.70	5.40	15.90	30.20	4.60	6.34	5.00	4.60	.80	.00	.00	.60	81.14
OAK KNOLL RANGER STA	27.33	.22	.00	.01	1.93	.80	8.13	10.77	1.90	2.11	.68	.29	.44	.09	.00	.04	27.23
ORLEANS	55.90	.36	.00	.57	4.31	1.93	14.63	22.48	4.22	3.11	1.97	1.74	.58	.00	.00	.08	55.05
SAWYERS BAR RANGER STA	46.42	.27	.00	.43	3.17	1.76	13.70	19.49	2.45	2.61	1.29	.79	.46	.00	.00	.11	45.83
SEAD VALLEY RANGER STA	47.55	.18	.00	.26	3.44	1.79	13.96	20.07	3.02	3.03	1.08	.67	.15	.00	.00	.08	47.19
SOMESBAR-UKONOM R S	---	.51	.00	.39	4.52	2.40	15.45	26.35	4.13	4.99	1.77	1.72	--	.00	.00	.10	---
TRINITY RIVER																	
BIG BAR RANGER STA	45.28	.04	.00	.31	3.00	1.13	14.22	20.09	2.38	2.16	.67	.87	.41	.00	.00	.02	44.95
BURNT RANCH 1 S	47.89	.07	.00	.53	3.24	1.75	14.70	17.95	3.54	2.92	1.42	1.11	.66	.00	.00	T	47.29
BURNT RANCH H.M.S.	43.70	.02	.00	.46	3.26	1.11	13.38	16.96	3.29	2.50	1.44	.85	.43	.00	.00	.00	43.22
COFFEE CREEK R S	---	.0	.0	.3	2.1	2.6	24.9	---	4.6	2.6	.5	.2	1.4	.0	.0	.0	---
FOREST GLEN	77.96	T	.00	.24	5.08	2.59	26.33	31.76	5.22	4.59	.71	1.00	.39	.00	.00	2.83	80.55
HAYFORK RANGER STA	40.88	.10	.00	.07	2.99	.80	14.70	15.46	2.63	2.24	.55	.56	.73	.00	.00	.00	40.71
HOOPA	57.77	.08	.00	.40	4.26	2.07	15.65	24.07	4.04	3.50	1.95	1.59	.26	.00	.00	.03	57.32
HYAMPOM	---	.00	.00	.12	3.80	1.11	16.26	21.17	3.95	2.05	.55	--	.26	.00	.00	.00	---
TRINITY DAM VISTA PT	42.89	T	.00	.17	2.68	1.79	13.33	17.12	1.93	3.50	.28	.49	1.05	.00	.00	T	42.72
WEAVERVILLE RANGER STA	45.25	.02	.00	.17	2.82	1.18	15.74	17.55	3.15	2.38	.46	.69	1.09	.02	.00	.00	45.06
WILLOW CREEK																	
WILLOW CREEK	51.57	.08	.00	.39	4.56	1.63	13.42	20.03	4.08	3.64	2.13	1.34	.27	.00	.00	.05	51.15
MAD RIVER																	
ARCATA AIRPORT	49.60	.48	.04	.53	4.49	3.72	10.95	16.05	3.00	4.57	2.63	2.66	.43	.01	.01	.12	48.64
BIG LAGOON	60.93	.40	.00	1.25	4.13	5.04	12.57	22.54	3.93	5.11	3.03	2.55	.44	.00	.00	.15	59.43
BLUE LAKE	40.02	.03	.03	.50	3.73	2.46	9.79	11.04	3.85	3.53	1.93	2.37	.62	.00	.00	.41	39.87
BUTLER VALLEY RANCH	---																---
FIELDBROOK 4D RANCH	77.30	.00	T	1.30	6.60	4.50	18.30	26.10	6.15	3.50	6.15	3.60	1.10	.00	.00	.25	76.25
HONOR CAMP 42	71.57	.03	.09	1.26	6.54	3.99	15.01	25.66	5.43	4.22	4.71	3.41	1.10	.00	.00	.45	70.56
KORBEL	46.74	.02	.03	.36	4.01	2.32	11.56	15.89	3.44	3.23	2.60	2.06	.68	.00	.00	.37	46.70
MAD RIVER RANGER STA	70.61	.00	.00	.48	5.39	2.32	20.64	29.82	4.37	3.77	1.55	1.45	.52	.00	.00	.00	70.13
ORICK 3 NNE	69.90	.23	.02	1.13	4.96	4.53	15.40	26.71	3.03	5.79	3.73	3.70	.67	.00	.00	.35	68.37
ORICK ARCATA REDWOOD	57.67	.41	.00	1.13	4.41	4.57	13.32	18.68	2.77	4.71	3.59	3.09	.59	.00	.00	.31	56.44
ORICK PRAIRIE CREEK PK	66.10	.43	.05	1.24	4.54	4.56	14.82	23.54	4.34	5.00	3.50	3.51	.52	.00	.00	.23	64.56
PATRICK POINT STATE PK	60.82	.39	.07	1.39	4.60	4.65	13.46	21.69	4.52	4.09	3.19	2.20	.57	.00	.11	.49	59.57

- No record or record incomplete  
1 Trace  
2 Record ended  
3 Record began

TABLE A-2 (Continued)  
PRECIPITATION DATA  
NORTH COASTAL AREA

Station Name	Precipitation in inches																Total Oct. 1 To Sept. 30
	Total July 1 To June 30	1969						1970									
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
NORTH COASTAL AREA																	
EEL RIVER																	
ADANAC LODGE	81.55	.00	.00	.40	4.99	3.85	23.43	34.39	7.30	3.98	1.76	1.15	.30	.00	.00	.00	81.15
ALDERPOINT	57.08	T	.00	.38	3.57	2.23	17.98	23.23	4.34	3.41	.99	.95	.00	.00	.00	.00	56.70
BRANSCOMB 2 NW	87.27	T	.00	.49	5.16	4.23	23.60	38.90	6.85	5.03	1.64	.96	.41	.00	.00	.00	86.78
BRIDGEVILLE 4 NNW	67.30	T	.00	1.27	5.20	3.43	17.59	23.32	4.58	4.66	4.00	2.59	.66	.00	.00	.00	66.03
BULL CREEK	71.89	.00	.00	.47	3.59	3.97	20.34	29.51	6.65	3.96	2.32	.94	.14	.00	.00	T	71.42
BURLINGTON STATE PARK	72.62	.00	.00	.11	4.08	3.36	22.65	29.67	6.24	3.27	2.00	1.10	.14	.00	.00	T	72.51
COVELO	---	.00	.00	.11	2.80	1.39	14.71	---	3.10	2.61	.44	.25	.22	.00	.00	.00	---
COVELO EEL RIVER R S	42.61	.00	.00	.16	2.40	1.55	12.52	18.48	3.76	1.92	.86	.66	.30	.00	.00	.00	42.45
CUMMINGS	81.97	.00	.00	.34	4.05	3.68	22.12	36.44	5.80	5.05	2.82	1.30	.37	.00	.00	.00	81.63
EUREKA W B CITY	38.22	.05	T	.36	3.20	3.49	9.60	12.46	3.15	2.70	1.54	1.38	.29	T	T	.32	38.13
FERNDAL 2 NW	37.76	.16	.01	.38	1.85	3.96	9.72	12.40	3.77	2.88	1.62	.80	.21	.04	.15	.12	37.52
FORTUNA	38.42	.00	T	.36	2.19	2.43	11.36	12.74	3.06	3.16	1.75	1.18	.19	.00	.00	.02	38.08
FOX CAMP	---	---	---	1.94	4.85	5.41	28.78	40.09	7.27	4.82	2.26	1.80	.29	.00	.00	.00	95.57
GARBERVILLE	64.30	.00	.00	.28	4.15	3.50	20.20	23.77	5.37	4.54	1.90	.32	.27	.00	.00	T	64.02
GARBERVILLE H.M.S.	62.94	.04	.00	.37	4.52	2.68	19.06	22.05	5.32	5.89	1.72	.83	.46	.00	.00	.00	62.53
GRIZZLY CRK REDWOOD S P	53.31	.03	T	.80	3.08	2.86	15.36	18.04	4.78	3.38	3.23	1.37	.38	.00	.00	.12	52.60
HARRIS 7 SSE	62.78	T	.00	.24	2.59	2.51	21.09	24.59	5.97	2.99	1.69	.91	.20	.00	.00	.00	62.54
HIGH ROCK	67.99	T	.00	.37	3.05	3.63	20.31	27.54	6.59	3.17	2.02	1.15	.16	.00	T	.00	67.62
KNEELAND 10 SSE	53.29	.00	.00	1.31	3.54	2.27	14.22	17.70	4.31	3.18	3.85	2.40	.51	.00	.00	.03	52.01
LAKE MOUNTAIN	---	.00	.00	.27	3.45	RE											---
LAKE PILLSBURY NO. 2	---	.00	.00	.00	3.81	1.99	15.15	27.10	3.76	2.09	.72	RE					---
LAYTONVILLE	67.75	.00	.00	.17	4.55	2.36	19.14	31.72	4.64	3.40	.96	.56	.25	.00	.00	.00	67.58
MINA 3 NW	62.92	.00	.00	.32	2.28	5.35	18.58	24.62	4.18	3.61	2.26	1.72	.00	.00	.00	.00	62.60
MIRANDA 4 SE	57.8	.0	.0	.6	3.9	2.8	19.5	22.4	2.9	2.7	1.8	1.0	.2	.0	.0	.0	57.2
MIRANDA SPENGLER RCH	---	.00	.00	.48	3.84	2.33	---	21.26	5.44	2.55	1.46	.94	.21	.00	.00	.00	---
MYERS FLAT	70.46	.01	.00	.45	4.35	3.46	21.84	27.69	6.27	3.08	2.04	1.12	.15	.00	.00	.00	70.00
OLD HARRIS	73.84	.10	.00	.48	4.79	3.38	20.17	30.93	6.13	4.05	2.15	1.25	.41	.00	.00	.00	73.26
RICHARDSON GROVE S P	77.42	.00	.00	.37	4.64	3.41	24.57	31.29	5.83	3.62	2.60	.84	.25	.00	.00	T	77.05
SCOTIA	47.62	.01	.00	.70	1.40	3.40	14.45	17.32	4.65	3.24	1.33	1.03	.09	.00	T	.10	47.01
SHERWOOD VALLEY	---	---	---	---	4.29	2.46	21.79	34.23	5.72	4.78	.97	.86	.68	---	---	---	---
STANDISH HICKEY ST PK	77.48	.00	.00	.45	4.96	3.75	20.53	33.47	6.29	5.26	1.93	.77	.07	.00	.00	.00	77.03
SUNNY BRAE	42.15	.26	.03	.56	3.86	2.93	10.17	12.83	2.86	3.82	2.22	2.23	.38	.00	T	.52	41.82
WBOYT 2 SE	68.02	.00	.00	.37	4.02	3.35	23.92	28.56	2.48	1.52	2.33	1.47	.00	.00	.00	.00	67.65
WILLITS 1 NE	56.55	.00	.00	.09	3.39	1.82	15.05	26.05	5.50	2.65	1.20	.43	.37	.00	.00	.00	56.46
WILLITS HOWARD FOR R S	55.85	.00	.00	.16	2.69	1.87	14.91	26.55	4.81	2.49	1.36	.39	.62	.00	.00	.00	55.69
WILLITS N W P R R	---	.00	.00	.06	3.20	1.78	16.28	26.76	6.07	2.60	---	.27	---	---	---	---	---
ZENIA 1 SSE	72.73	.00	.00	.75	4.62	3.20	20.12	27.56	5.88	5.47	2.41	2.11	.61	.00	.00	.06	72.04
ZENIA-KETTENPOM STORE	---	---	---	---	---	RE	19.27	29.84	5.30	4.20	2.17	1.96	.49	.00	.00	.00	---
MATTOLE RIVER																	
FERNDAL 8 SSW	39.89	.41	.33	.61	2.01	3.51	10.32	10.82	2.49	4.20	2.70	1.58	.91	---	---	---	---
HONEYDEW 2 WSW	114.18	.00	T	.62	4.31	8.35	36.74	45.26	10.40	5.63	1.84	.77	.26	.00	.00	.07	113.63
HONEYDEW HUNTER	118.45	.00	.00	.64	4.00	8.19	37.62	46.94	14.16	4.12	1.84	.81	.13	.00	.00	.07	117.88
PETROLIA	64.98	.00	.00	.58	2.53	5.40	20.81	22.38	5.97	3.99	1.78	1.19	.35	.00	.00	.08	64.48
PETROLIA 4 NW	47.68	.00	.00	.83	2.43	4.50	12.72	14.45	4.03	4.05	2.72	1.50	.45	---	---	---	---
SHELTER COVE	52.30	.02	T	1.80	4.63	4.97	15.12	14.74	5.03	2.76	1.36	1.24	.63	.00	.00	.02	50.50
UPPER MATTOLE	80.51	.00	.00	.67	4.23	6.91	24.21	29.44	8.16	3.99	2.01	.75	.14	.00	.00	.10	79.94
WHITETHORN	86.89	.05	.00	.92	6.03	5.96	25.99	31.86	7.85	4.73	1.92	1.01	.57	.00	.00	.00	85.92

- No record or record incomplete  
T Trace  
RE Record ended  
RB Record began

TABLE A-3  
STORAGE GAGE PRECIPITATION DATA  
NORTH COASTAL AREA

Station	Measuring Agency	1969-70 Season		Precipitation in Inches
		Measurement Period		
NORTH COASTAL AREA				
<u>SMITH RIVER</u>				
Camp Six Lookout	DWR	7-08-69	6-23-70	107.92
<u>LOST RIVER-BUTTE VALLEY</u>				
Bray 10 WSW	DWR	7-08-69	6-23-70	24.15
Crowder Flat	DWR	8-15-69	6-24-70	19.62
Long Bell Station	DWR	7-11-69	6-25-70	34.36
Medicine Lake	DWR	7-10-69	6-25-70	51.49
<u>SHASTA-SCOTT VALLEYS</u>				
Gazelle Lookout	DWR	7-09-69	6-24-70	18.11
<u>KLAMATH RIVER</u>				
Beswick 7S	DWR	7-08-69	6-23-70	42.58
Blue Creek Mountain	DWR	7-07-69	6-22-70	119.44
<u>TRINITY RIVER</u>				
Board Camp Mountain	DWR	7-07-69	6-22-70	99.20
Mumbo Basin	DWR	7-10-69	6-24-70	65.37
<u>EEL RIVER</u>				
Plaskett	DWR	7-24-69	7-07-70	67.25

DWR - Department of Water Resources

## TABLE A-4 EVAPORATION DATA

The definition of terms and the abbreviations used in Table A-4 are as follows:

- Evap - The total amount of water evaporated from the pan in inches for the month.
- Wind - The amount of movement of air over the pan in miles for the month.
- Avg Max - The arithmetic average of daily maximum water temperatures in degrees Fahrenheit for the month.
- Avg Min - The arithmetic average of daily minimum water temperatures in degrees Fahrenheit for the month.

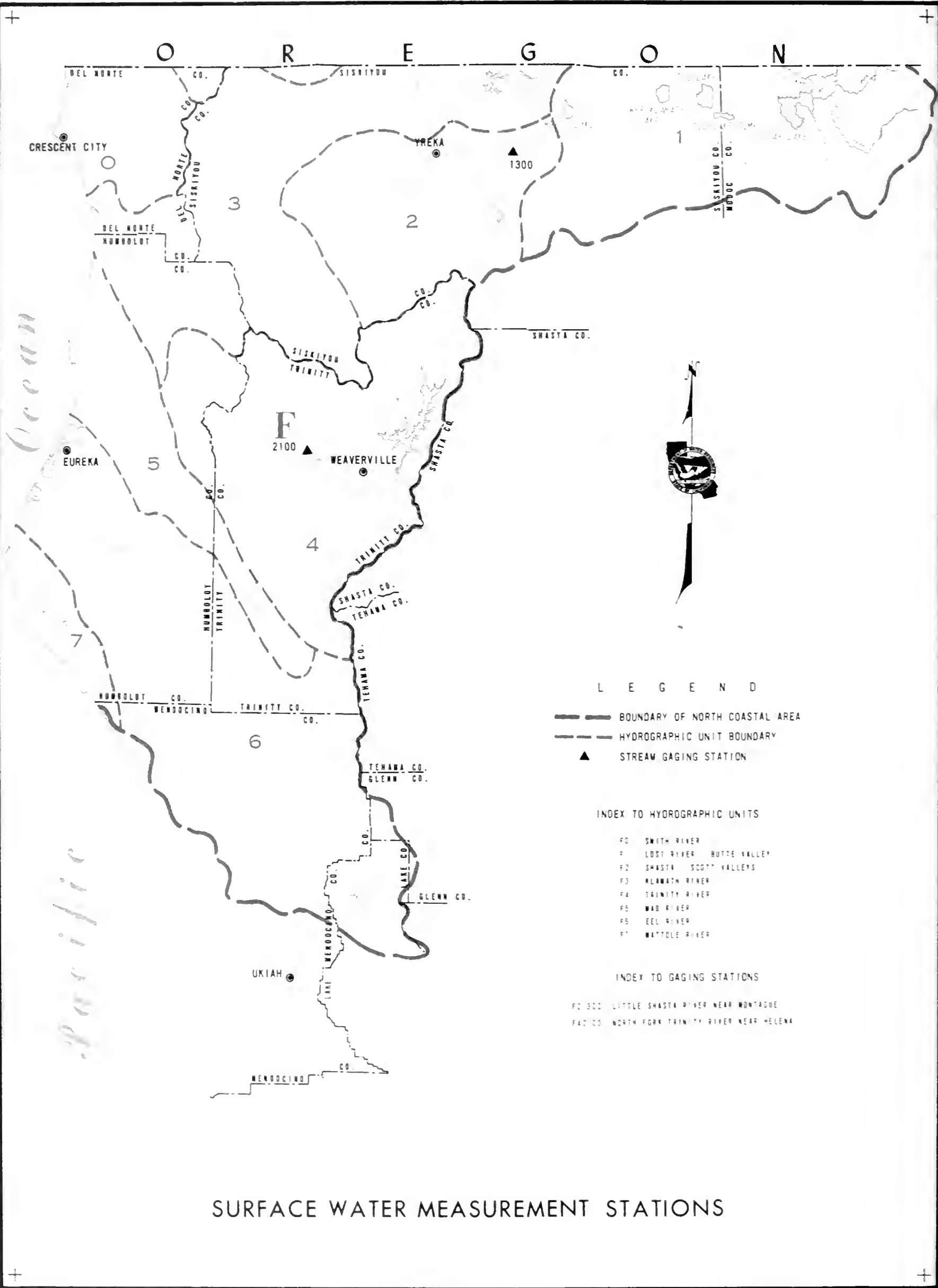


TABLE A-4 EVAPORATION DATA

## NORTH COASTAL AREA

Station Name		Total July 1 To June 30	Evaporation in Inches						Wind in Total Miles						Water Temperature in Degrees Fahrenheit						Total Oct 1 To Sept 30
			1969						1970												
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				
NORTH COASTAL AREA																					
LOST RIVER-BUTTE VALLEY																					
TULELAKE	Evap Wind Avg Max Avg Min	---	9.57	9.61	8.41	---	---	---	---	---	---	---	8.28	7.58	9.86	9.12	6.53	---			
KLAMATH RIVER																					
SETAD VALLEY RANGER S	Evap Wind Avg Max Avg Min	---	8.18	8.13	5.08	---	---	---	---	---	---	---	---	---	9.64	8.50	4.86	---			
TRINITY RIVER																					
TRINITY DAM VISTA PT	Evap Wind Avg Max Avg Min	---	10.21 1287	9.79 1258	5.81 1039	2.58 1161	.53 776	---	---	---	2.92 1725	4.35 1443	7.61 1089	2.35 1186	11.42 1196	10.49 1185	6.57 1177	---			
WILLOW CREEK 1 NW	Evap Wind Avg Max Avg Min	---	8.47 508 93.2 61.1	7.04 527 89.2 50.7	4.87 333 85.7 54.7	2.80 188 71.6 45.4	.72 148 57.3 41.9	---	---	.84 ---	1.95 ---	2.40 206	4.73 203	6.90 311	9.61 440	7.38 488	4.55 346	---			
EEL RIVER																					
PERUDALE 2 NW	Evap Wind Avg Max Avg Min	33.85 10886 68.8 49.2	4.66 870 78.8 56.6	4.60 735 79.9 56.2	3.60 755 76.2 54.3	2.32 832 67.3 49.0	1.03 619 59.2 43.6	.59 1007 55.1 44.5	.51 1486 55.2 45.6	1.50 761 61.1 44.2	2.53 996 66.4 44.8	3.46 1042 70.0 45.6	4.62 953 76.9 51.2	4.43 830 78.5 54.8	4.74 681 79.2 56.0	3.57 660 76.2 54.5	4.17 652 76.8 52.1	33.47 10519 68.5 48.8			
LAKE PILLSBURY NO. 2	Evap Wind Avg Max Avg Min	---	10.83 532 93.3 60.4	10.18 503 90.7 57.6	6.91 453 84.0 55.8	3.16 342 67.9 44.9	1.20 156 56.2 40.1	.56 171 50.3 41.2	.70 272 51.3 41.4	1.69 259 58.6 39.5	2.92 1725 ---	5.33 943 62.3 42.3	RE RE RE RE					---			

RE - Record Ended



APPENDIX B  
SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1970 water year, the period from October 1, 1969, to September 30, 1970. The data consist of daily mean discharges and station locations at two gages, and summary tables of monthly and annual unimpaired runoff from major streams.

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. The data published in the following reports together with this report present a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California  
Part 1. Surface Water Records  
Volume 1: Colorado River Basin, Southern Great Basin,  
and Pacific Slope Basins excluding Central Valley"  
United States Department of the Interior  
Geological Survey  
Prepared in cooperation with the California Department of Water Resources and with other agencies.
2. Bulletin 120, "Water Conditions in California", Fall Issue  
Department of Water Resources

Each of the two stations in this appendix has been assigned an identification number. The letter and first digit denote the drainage basin as shown below. The remaining digits further identify each of the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

TABLE B-1 ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.

TABLE B-1  
ANNUAL UNIMPAIRED RUNOFF  
In Percent of Average

Water Year	Klamath River, Copco To Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
Average Annual Runoff*	4419	1226	1227	5383
1920-21			146	145
1921-22			64	69
1922-23			56	51
1923-24			22	16
1924-25			122	133
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30		63	66	65
1930-31	40	39	33	30
1931-32	76	85	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	82	93	79	94
1935-36	90	93	83	107
1936-37	74	80	81	66
1937-38	179	182	172	200
1938-39	58	62	47	50
1939-40	102	104	131	135
1940-41	101	103	208	153
1941-42	105	108	147	138
1942-43	134	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	116	124	115	112
1946-47	59	63	60	49
1947-48	97	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	143	147	131	133
1951-52	150	159	148	149
1952-53	146	147	131	133
1953-54	139	131	129	129
1954-55	60	48	60	60
1955-56	187	179	165	190
1956-57	98	97	88	81
1957-58	185	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	131
1963-64	90	92	65	64
1964-65	162	152	140	175
1965-66	107	90	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69 **	129	137	142	162
1969-70 **	135	132	130	141

\* Average Unimpaired Runoff in Thousands of Acre-Feet Adjusted To  
the 50-Year Period October 1920 Through September 1970.

\*\* Preliminary Data Subject to Revision.



TABLE B-2  
MONTHLY UNIMPAIRED RUNOFF  
In Percent of Average

Month		Klamath River, Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
October 1969	Percent Average	33 85	85 21	79 21	44 55
November 1969	Percent Average	33 214	39 55	42 51	16 284
December 1969	Percent Average	154 485	171 129	230 99	168 943
January 1970	Percent Average	391 644	444 166	501 110	352 1225
February 1970	Percent Average	125 608	106 158	109 149	73 1177
March 1970	Percent Average	113 587	108 158	109 157	67 795
April 1970	Percent Average	47 627	44 179	51 217	26 550
May 1970	Percent Average	67 586	40 190	83 241	31 237
June 1970	Percent Average	90 336	72 108	80 123	31 79
July 1970	Percent Average	70 125	78 35	74 36	62 22
August 1970	Percent Average	74 66	95 15	41 13	59 10
September 1970	Percent Average	92 55	89 10	30 9	50 7
1969-70 Water Year		135 5968	132 1620	130 1594	141 7614

Note: The Percent Values are Preliminary Data Subject to Revision  
Average Unimpaired Runoff in Thousands of Acre Feet Adjusted To the 50-Year  
Period October 1920 Through September 1970.

TABLE B-3 DAILY MEAN DISCHARGE

The streamflow table is arranged in downstream order for each stream or stream system. Stations on a tributary entering between two main stem stations are listed between those stations, and in downstream order on that tributary. A stream gaging station is named after the stream and the nearest post office (e.g., Little Shasta River near Montague).

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

1. Daily flows - cubic feet per second

0.0	- 9.9	nearest	Tenth
10	- 999	"	Unit
1,000	- 9,999	"	Ten
10,000	- 99,999	"	Hundred
100,000	- 999,999	"	Thousand

2. Monthly means - cubic feet per second

0.0	- 99.9	nearest	Tenth
100	- 9,999	"	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred

3. Yearly totals - acre-feet

0.0	- 9,999	nearest	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred
1,000,000	- 9,999,999	"	Thousand



TABLE 8-3

**DAILY MEAN DISCHARGE**  
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1970	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	4.7	3.5	3.8 E	18	38	22	20	25	28	10	6.4	5.0	1
2	5.6	3.2	3.8 E	17	33	21	21	28	27	9.4	6.4	5.1	2
3	5.0	3.2	3.8 E	16	37	21	20	31	26	9.0	6.2	5.0	3
4	4.7	5.3	3.8 E	15	35	20	21	33	25	8.3	6.2	5.2	4
5	4.7	14	3.8 E	14	33	19	22	33	23	8.7	6.1	5.3	5
6	4.7	7.3	3.8 E	14	32	26	24	31	24	8.6	6.0	5.5	6
7	4.4	5.3	3.8 E	14	32	62	22	32	22	8.2	6.0	5.3	7
8	6.6	4.7	3.8 E	15	33	63	21	41	23	7.9	5.9	5.1 *	8
9	6.0	4.4	5.0 E	14	32 *	44	23	41	24	7.8	5.3	5.0	9
10	6.0	4.4	9.5 E	4.7	31	36	31	40	25	7.6	5.8	5.0	10
11	5.3	4.4	19 E	7.3	30	35	27	33	20	7.7	5.7	4.9	11
12	4.8	3.8	30 E	12	35	35	24	40	19	7.7	5.6	4.8	12
13	4.4	3.8	23 E	26	32	37	25	41	23	7.5	5.5	4.7	13
14	4.7	3.2	14 E	88	29	45	25	40 *	20	7.4	5.5	4.7	14
15	6.6	3.8	9.5 E	53	27	40	24	40	17	7.2	5.3	4.7	15
16	11	3.8	6.0 E	75	26	36	24	40	16	7.1	5.3	4.7	16
17	8.1	2.5	6.6 *	82	27	33 *	22	41	15 *	7.0	5.2	4.7	17
18	6.0	3.2	6.2	58	25	29	22	42	14	7.2	5.2	4.7	18
19	5.3	3.1	31	46	22	27	27	42	14	7.2	5.2	4.7	19
20	5.3	2.5	47	40 *	21	26	24	41	13	7.0	5.2	4.6	20
21	5.0	2.5	178	73	21	25	23	40	13	7.0 *	5.1	4.5	21
22	4.7	2.5	70	218	20	25	22	39	14	7.0	5.1	4.5	22
23	4.4 *	3.2	48	269	19	25	23	33	12	6.8	5.1	4.5	23
24	4.4	3.2	42	160	19	25	23	37	12	6.6	5.1	4.5	24
25	4.4	3.2	40	88	17	25	22	36	11	6.5	5.0	4.4	25
26	4.4	3.2	34	99	17	25	23	36	11	6.5	5.0	4.4	26
27	4.4	3.8	28	116	17	23	23	35	11	6.6	5.0	4.3	27
28	4.4	3.8	26	65	21	23	23	34	14	6.7	5.0	4.2	28
29	4.4	3.8	24	51		23	21	33	12	6.4	5.0	4.2	29
30	4.4	3.8	23	47		21	23	31	11	6.4	5.0	4.2	30
31	3.8		22	40		20 *		30		6.4	5.0		31
MEAN	5.3	4.1	24.9	59.8	27.2	30.2	23.2	36.4	18.0	7.5	5.5	4.7	MEAN
MAX.	11	14	178	269	38	63	31	42	23	10	6.4	5.5	MAX.
MIN.	3.8	2.5	3.8	4.7	17	19	20	25	11	6.4	5.0	4.2	MIN.
AC. FT.	323	243	1530	3680	1510	1860	1380	2240	1070	460	337	253	AC. FT.

## WATER YEAR SUMMARY

E - ESTIMATED  
 NR - NO RECORD  
 \* - DISCHARGE MEASUREMENT OR  
 OBSERVATION OF NO FLOW  
 # - E AND \*

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
20.7	575	4.66	1	23	1600	2.5	1.33	11	17	0000	14970

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CF5	GAGE HT.	DATE			FROM	TO		
41 45 11	122 17 58	NW15 45N 4W	5910 E	10.66	12/22/64	28-NOV 51 8 APR 52-APR 55 SEP 56-DATE	28-NOV 51 8 APR 52-APR 55 SEP 56-DATE	1956	1964	0.00	LOCAL

Station located S of Ball Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Macedoel. Stage-discharge relationship affected by ice at times. Drainage area is 48.2 sq. mi.

8 - Irrigation season only.



TABLE B-3 (CONT)

**DAILY MEAN DISCHARGE**  
 (IN CUBIC FEET PER SECOND)

WATER YEAR	STATION NO.	STATION NAME
1970	F42100	NORTH FORK TRINITY RIVER NEAR HELENA

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	30	41	22	367	965	543	326	166	348	94	37	22	1
2	30	40	21	326	847	502	324	233	392	93	36	22	2
3	30	39	20	292	730	471	307	325	385	108	35	22 *	3
4	30	59	19	259	732	455	300	377	356	117	35	22	4
5	30	400	18	227	630	428	303	374	352	122	34	24	5
6	31	182	17	201	639	416	309	329	349	121	34	24	6
7	31	119	16	182	606	624	292	287	321	103 *	34	23	7
8	44	104	25	184	586	762	274	325	295	91	33	22	8
9	50	89	20	316	577	635	263	369	248	76	32	22	9
10	52	77	23	710 *	568	622	309	306	216	70	31	21	10
11	45	80	156	690	562 *	593	302	261	180	67	30	21	11
12	40	87	1320	743	600	569	271	231	148	65	29	21	12
13	38	82	1160	1550	602	566	260	216	142	62	29	20	13
14	37	73	1520	3070	566	654	245	225	153	58	29	20	14
15	66	67	834	2170	538	637	231 *	295	140	59	29	21	15
16	226	65	555 *	3220	608	604	221	444	150 *	63	28	21	16
17	174	58	501	4270	636	580	209	501	164	61	27	21	17
18	86	55	521	2990	650	540 *	207	452	179	55	27	21	18
19	67	52	1400 *	2910	611	504	220	393 *	232	50	27	21	19
20	64	49 *	2460	3150	579	473	193	337	273	50	27	22	20
21	99	45	7770	6780	555	455	192	320	266	50	26	22	21
22	82	42	2150	8530 *	529	448	184 *	353	275	49	26	21	22
23	67	39	1730 *	10200	506	451	174	380	260	46	26	21	23
24	59	36	1370	8230	488	449	163	336	240	44	25	21	24
25	52	34	1120	4210 *	471	446	161	381	204	43	25	20	25
26	48	31	1010	4290	465	427	172	426	204	43	25 *	20	26
27	46 *	29	793	6340	467	413	153	383	185	43	25	20	27
28	45	27	632	2800	518	400	146	317	164	43	24	20	28
29	43	25	533	1860		385	141	300	132	43	23	20 *	29
30	43	24	463	1410		367 *	146	294	102	41 *	23	19	30
31	42		409	1140		345		303		39	22		31
MEAN	53.9	71.7	924	2699	606	510	234	330	235	66.9	28.8	21.2	MEAN
MAX.	226	400	7770	10200	965	762	326	501	392	122	37	24	MAX.
MIN.	30	24	16	132	465	345	141	166	102	39	22	19	MIN.
AC. FT.	3620	4260	56840	166000	33630	31390	13900	20310	13990	4110	1770	1260	AC. FT.

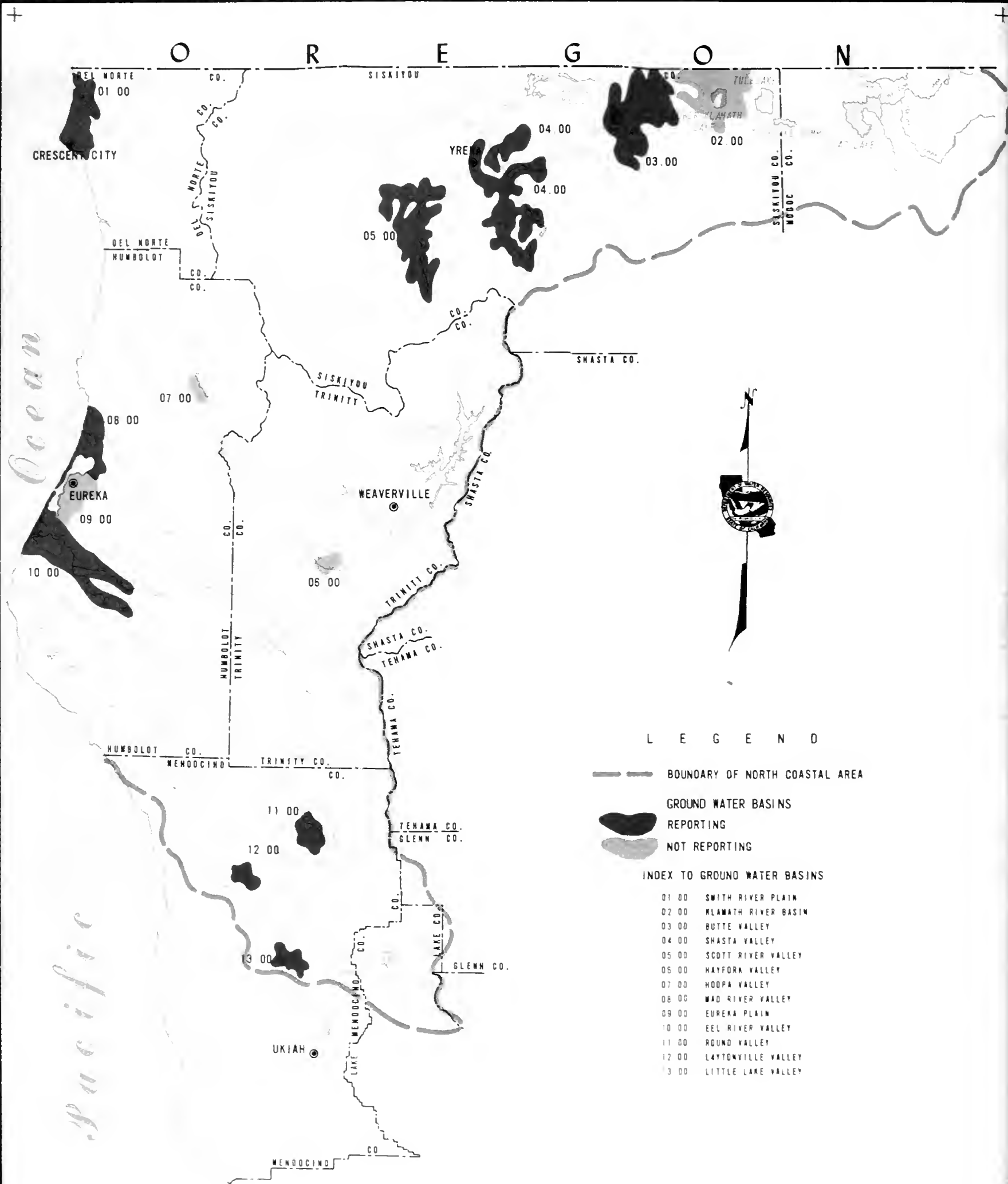
## WATER YEAR SUMMARY

E - ESTIMATED  
 NR - NO RECORD  
 \* - DISCHARGE MEASUREMENT OR  
 OBSERVATION OF NO FLOW  
 # - E AND \*

MEAN	MAXIMUM					MINIMUM					TOTAL
DISCHARGE	DISCHARGE	GAGE HT.	MO.	DAY	TIME	DISCHARGE	GAGE HT.	MO.	DAY	TIME	ACRE FEET
485	12800	19.40	12	21	0645	15	6.52	12	7	1715	351100

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD		DATUM OF GAGE			
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
40 46 55	123 07 40	SW21 34N 11W	35800	27.93	12/22/64	JAN 57-DATE	JAN 57-DATE	1957		0.00	LOCAL

Station located 1.0 mi. above mouth, 0.6 mi. N of Helena. Stage-discharge relationship affected by ice at times. Drainage area is 151 sq. mi.



GROUND WATER BASINS, WATER LEVEL MEASUREMENTS

## APPENDIX C

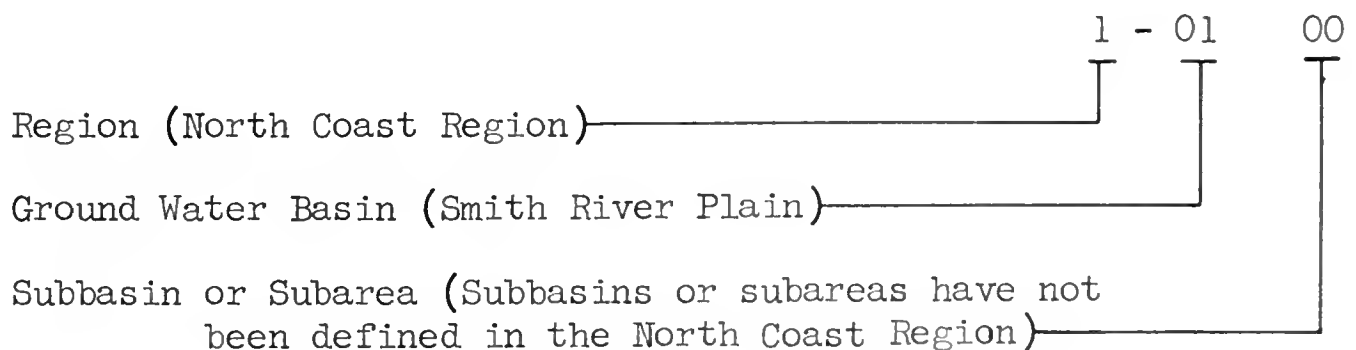
### GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 46 wells for the period October 1, 1969, through September 30, 1970. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coastal Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:



The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:

Township \_\_\_\_\_ 16N/  
Range \_\_\_\_\_ 1W      -      02      J      01  
Section \_\_\_\_\_  
Tract \_\_\_\_\_  
Sequence Number \_\_\_\_\_  
Base and Meridian \_\_\_\_\_

This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1  
AVERAGE CHANGE OF GROUND WATER LEVELS  
AND SUMMARY OF WELL MEASUREMENTS REPORTED  
NORTH COASTAL AREA

Ground Water Basin		Average Change Spring 1969 to Spring 1970 in feet	Measuring Agency	Number of Wells Reported	
Name	Number			Fall 1969	Spring 1970

NORTH COASTAL REGION

Smith River Plain	1-01.00	-1.2	DWR	6	6
Butte Valley	1-03.00	0.0	DWR	7	7
Shasta Valley	1-04.00	-0.1	DWR	6	6
Scott River Valley	1-05.00	+0.2	DWR	5	5
Mad River Valley	1-08.00	-3.8	DWR	2	2
Eel River Valley	1-10.00	-0.2	DWR	4	4
Round Valley	1-11.00	-0.7	DWR	6	5
Laytonville Valley	1-12.00	-3.9	DWR	4	4
Little Lake Valley	1-13.00	-2.1	DWR	6	5

---

DWR - Department of Water Resources

## TABLE C-2 GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols

follows:

page 21. State Well Number - Refer to the explanation presented on

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

- |                                      |  |
|--------------------------------------|--|
| (1) Pumping                          | (6) Other                              |
| (2) Nearby pump operating            | (7) Recharge operation at or near well |
| (3) Casing leaking or wet            | (8) Oil in casing                      |
| (4) Pumped recently                  | (9) Caved or deepened measurement      |
| (5) Air or pressure gage measurement |  |

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

- |                               |                               |
|-------------------------------|-------------------------------|
| (1) Pumping                   | (6) Well has been destroyed   |
| (2) Pump house locked         | (7) Special                   |
| (3) Tape hung up              | (8) Casing leaking or wet     |
| (4) Cannot get tape in casing | (9) Temporarily inaccessible  |
| (5) Unable to locate well     | (0) Measurements discontinued |

The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

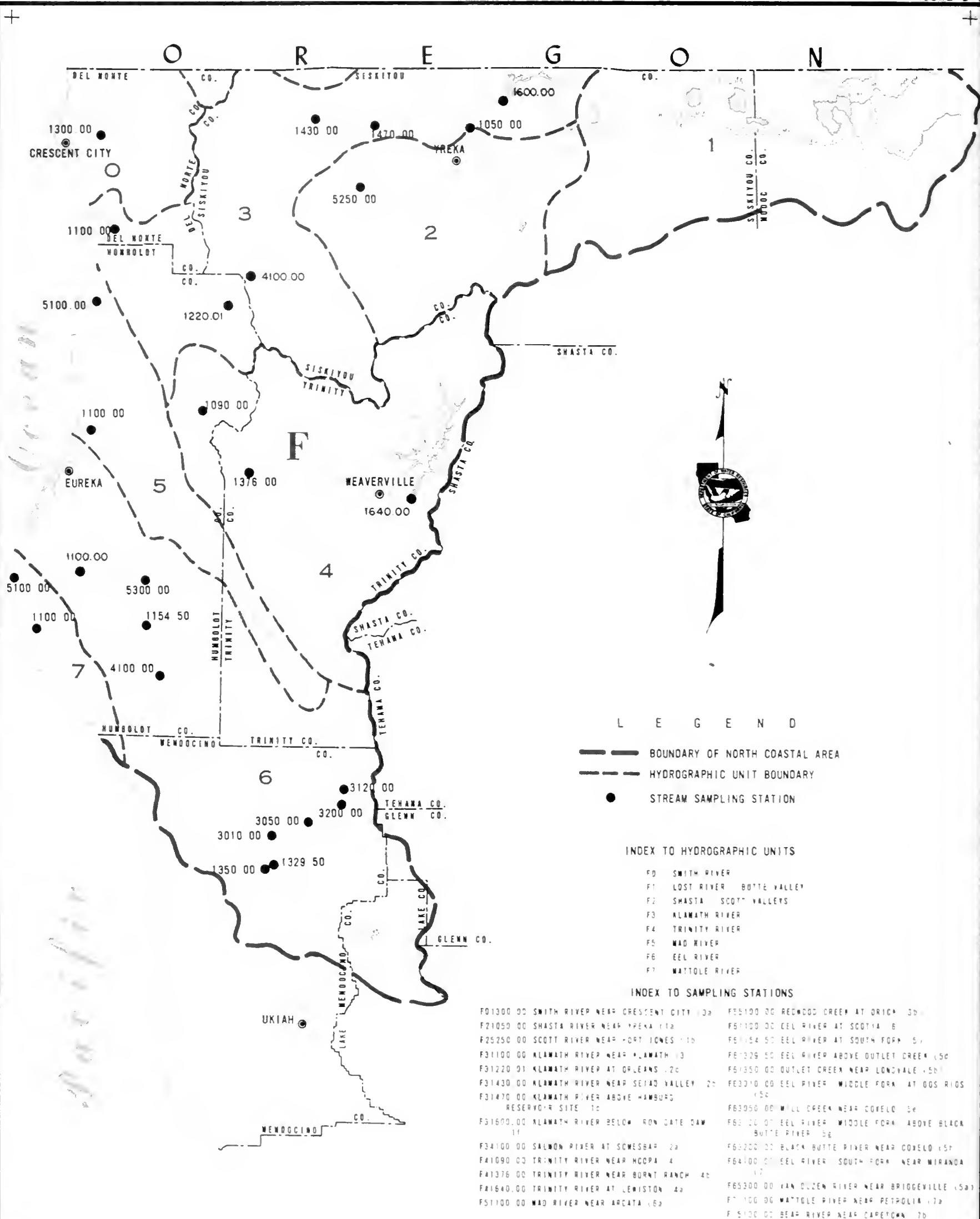


TABLE C-2

## GROUND WATER LEVELS AT WELLS

## NORTH COASTAL AREA

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA
SMITH RIVER PLAIN 1-01.00						MAD RIVER VALLEY 1-02.00					
16N/01W-02J01 H	127.0	10-14-69 4-08-70	21.1 18.5	105.9 103.5	5050 5050	06N/01E-06H01 H	151.0	10-15-69 4-07-70	13.0 4.5	137.0 146.5	5050 5050
16N/01W-17K01 H	48.0	10-14-69 4-08-70	22.3 13.8	25.7 34.2	5050 5050	06N/01E-29P01 H	25.0	10-15-69 4-07-70	9.3 12.0	15.7 13.0	5050 5050
17N/01W-02P01 H	31.0	10-14-69 4-08-70	20.5 18.7	10.5 12.3	5050 5050	EEL RIVER VALLEY 1-10.00					
17N/01W-03B01 H	14.0	10-14-69 4-08-70	13.0 (1) 12.7	1.0 1.3	5050 5050	02N/01W-08B01 H	34.0	10-15-69 4-07-70	21.4 15.4	12.6 19.2	5050 5050
17N/01W-15M02 H	21.0	10-14-69 4-08-70	16.0 9.9	5.0 11.1	5050 5050	03N/01W-18D01 H	15.0	10-15-69 4-07-70	2.4 1.3	12.6 13.2	5050 5050
18N/01W-26P01 H	38.0	10-14-69 4-08-70	25.7 14.0	12.3 24.0	5050 5050	03N/01W-34J01 H	53.0	10-15-69 4-07-70	34.7 31.6	18.3 21.4	5050 5050
BUTTE VALLEY 1-03.00						03N/02W-26R01 H	12.0	10-15-69 4-07-70	10.2 7.0	1.8 5.0	5050 5050
46N/01E-06N01 M	4242.0	10-08-69 4-06-70	28.0 20.0	4214.0 4222.0	5050 5050	ROUND VALLEY 1-11.00					
46N/02W-25R02 M	4256.0	10-08-69 4-06-70	32.9 23.5	4223.1 4232.5	5050 5050	22N/12W-04B01 M	1351.0	10-16-69 4-09-70	15.6 6.4	1335.4 1344.6	5050 5050
47N/01W-14B01 M	4234.0	10-08-69 4-06-70	10.4 8.2	4223.6 4225.8	5050 5050	22N/12W-06L03 M	1370.0	10-16-69 4-09-70	3.0 -10.6	1367.0 1350.6	5050 5050
47N/01W-17R01 M	4240.0	10-08-69 4-06-70	9.5 8.3	4230.5 4231.7	5050 5050	22N/13W-12R01 M	1400.0	10-16-69 4-09-70	28.7 6.4	1371.3 1393.6	5050 5050
47N/01W-19L01 M	4238.0	10-08-69 4-06-70	5.3 3.5	4232.7 4234.5	5050 5050	23N/12W-31N01 M	1388.0	10-16-69	(0)		5050
47N/01W-27B01 M	4233.0	10-08-69 4-06-70	9.7 6.5	4223.3 4226.5	5050 5050	23N/13W-36C03 M	1410.0	10-16-69 4-09-70	28.5 9.6	1381.5 1400.4	5050 5050
48N/01W-26N01 M	4244.0	10-08-69 4-06-70	20.2 12.8	4223.8 4231.2	5050 5050	23N/13W-36Q01 M	1403.0	10-16-69 4-09-70	20.4 2.4	1382.6 1400.6	5050 5050
SHASTA VALLEY 1-04.00						LAYTONVILLE VALLEY 1-12.00					
42N/05W-20J01 M	2882.0	10-07-69 4-06-70	3.6 5.1	2878.4 2876.9	5050 5050	21N/14W-30M01 M	1688.0	10-15-69 4-09-70	15.5 6.8	1672.5 1681.2	5050 5050
42N/06W-10J01 M	2835.0	10-07-69 4-06-70	13.5 5.5	2821.5 2829.5	5050 5050	21N/15W-01L02 M	1682.0	10-15-69 4-09-70	19.5 10.0	1662.5 1672.0	5050 5050
43N/06W-22A01 M	2665.0	10-07-69 4-06-70	9.0 (1)	2656.0 5050	5050 5050	21N/15W-12M02 M	1630.0	10-15-69 4-09-70	16.8 10.6	1613.2 1619.4	5050 5050
44N/05W-34H01 M	2637.0	10-07-69 4-06-70	25.0 28.8	2612.0 2608.2	5050 5050	21N/15W-24A01 M	1653.0	10-15-69 4-09-70	12.5 3.3	1640.5 1649.7	5050 5050
44N/06W-10F01 M	2537.0	10-07-69 4-06-70	14.8 25.0	2522.2 2512.0	5050 5050	LITTLE LAKE VALLEY 1-13.00					
45N/06W-19B01 M	2538.0	10-07-69 4-06-70	20.9 18.2	2517.1 2519.8	5050 5050	18N/13W-03L01 M	1340.0	10-16-69 4-09-70	9.2 2.9	1330.8 1337.1	5050 5050
SCOTT RIVER VALLEY 1-05.00						18N/13W-17J01 M	1370.0	10-16-69 4-09-70	27.3 21.2	1342.7 1348.8	5050 5050
42N/09W-02A02 M	2746.0	10-07-69 4-06-70	12.0 8.0	2734.0 2738.0	5050 5050	18N/13W-18B01 M	1365.0	10-16-69 4-09-70	30.9 25.2	1334.1 1339.8	5050 5050
42N/09W-27N01 M	2930.0	10-07-69 4-06-70	8.4 2.1	2921.6 2927.9	5050 5050	18N/13W-20H03 M	1385.0	10-16-69	(0)		5050
43N/09W-23F01 M	2728.0	10-07-69 4-06-70	6.0 3.2	2722.0 2724.8	5050 5050	19N/13W-32F01 M	1347.0	10-16-69 4-09-70	15.0 8.3	1332.0 1338.7	5050 5050
43N/09W-24F01 M	2735.0	10-07-69 4-06-70	8.2 3.0	2726.8 2732.0	5050 5050	19N/13W-32L02 M	1350.0	10-16-69 4-09-70	13.7 11.5	1336.3 1338.5	5050 5050
44N/09W-28F01 M	2711.0	10-07-69 4-06-70	21.8 9.3	2689.2 2701.7	5050 5050						



## SURFACE WATER SAMPLING STATIONS

## APPENDIX D

### SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1969, through September 30, 1970. The data were collected from 26 stream stations in the North Coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 12th Edition, 1965. In some cases, the methods used were those presented in the U. S. Geological Survey Water-Supply Paper 1454, "Methods for Collection and Analysis of Water Samples", 1960. The analysis for trace elements is in accordance with the U. S. Geological Survey Water-Supply Paper 1540-B, "Concentration Method for the Spectro-Chemical Determination of Minor Elements in Water".

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements". A sequential number (formerly employed) follows each station name for reference.



TABLE D-1  
SAMPLING STATION DATA AND INDEX  
North Coastal Area

Station	Station Number	Location *	Beginning of Record	Frequency of Sampling	Analyses on Page
Bear River near Capetown (7b)	F75100.00	01N/03W-13 H	MAY 1964	Semiannually	41
Black Butte River near Covelo (5h)	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	39, 47
Eel River above Outlet Creek (5d)	F61329.50	21N/13W-31 M	APR. 1958	Monthly	37, 42, 46
Eel River at Scotia (6)	F61100.00	02N/01E-31 H	APR. 1951	Monthly	36, 42, 43, 47
Eel River at South Fork (5)	F61154.50	01S/02E-26 H	APR. 1951	Monthly	37
Eel River, Middle Fork, above Black Butte River (5g)	F63120.00	23N/11W-28 M	NOV. 1964	Monthly	39, 47
Eel River, Middle Fork, at Dos Rios (5c)	F63010.00	21N/13W-06 M	APR. 1958	Monthly	38, 42, 46
Eel River, South Fork, near Miranda (7)	F64100.00	03S/04E-30 H	APR. 1951	Monthly	40, 49
Klamath River above Hamburg Reservoir Site (1c)	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	33, 45
Klamath River at Orleans (2c)	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	32, 42
Klamath River below Iron Gate Dam (1f)	F31600.00	47N/05W-17 M	DEC. 1961	Monthly	34, 42, 45
Klamath River near Klamath (3)	F31100.00	13N/01E-24 H	APR. 1951	Monthly	32, 42, 43, 45
Klamath River near Seiad Valley (2b)	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	33, 42, 45
Mad River near Arcata (6a)	F51100.00	06N/01E-15 H	NOV. 1958	Monthly	35, 42
Mattole River at Petrolia (7a)	F71100.00	02S/02W-11 H	JAN. 1959	Semiannually	41
Mill Creek near Covelo (5e)	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	39, 47
Outlet Creek near Longvale (5b)	F61350.00	20N/14W-01 M	MAY 1958	Monthly	38
Redwood Creek at Orick (3b)	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	36
Salmon River at Somesbar (2a)	F34100.00	11N/06E-02 H	NOV. 1958	Semiannually	34
Scott River near Fort Jones (1b)	F25250.00	44N/10W-29 M	DEC. 1958	Bimonthly	32
Shasta River near Yreka (1a)	F21050.00	46N/07W-24 M	DEC. 1958	Monthly	31
Smith River near Crescent City (3a)	F01300.00	16N/01E-10 H	APR. 1951	Monthly	31
Trinity River near Hoopa (4)	F41090.00	08N/05E-31 H	APR. 1951	Monthly	34, 42, 46
Trinity River at Lewiston (4a)	F41640.00	33N/08E-17 M	APR. 1951	Bimonthly	35, 46
Trinity River near Burnt Ranch (4b)	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	35, 46
Van Duzen River near Bridgeville (5a)	F65300.00	01N/02E-12 H	APR. 1958	Monthly	40
Williams Creek near Covelo (5f)	F63105.00	23N/12W-24 M	NOV. 1964	None	**

\* - H = Humboldt Base and Meridian.

- M = Mount Diablo Base and Meridian.

\*\* - This station dropped from the monitoring program, October 1969.

## TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

An explanation of column headings follows:

The LAB and SAMPLER agency codes are as follows:

5000 - U. S. Geological Survey

5050 - California Department of Water Resources

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock.
<u>GH</u>	- The instantaneous gage height in feet above an established datum.
<u>Q</u>	- The instantaneous discharge in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DO</u>	- The dissolved oxygen content in milligrams per liter.
<u>SAT</u>	- The percent saturation.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit at the time of field sampling. Water temperature in degrees Celsius is computed from degrees Fahrenheit.
<u>PH LAB &amp; FIELD</u>	- Measure of acidity or alkalinity of water.
<u>EC LAB</u>	- The electrical conductance in micromhos at 25° Celsius.
<u>EC FIELD</u>	- The electrical conductance in micromhos at temperature when sampled.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius.
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents.
<u>TH</u>	- Total hardness.
<u>NCH</u>	- Noncarbonate hardness.
<u>TURB</u>	- Turbidity in Jackson Candle Units.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F <sup>3</sup>	- Fluoride	SiO <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	SO <sub>4</sub> <sup>2</sup>	- Sulfate

# MINERAL ANALYSIS OF SURFACE WATER

## NORTH COASTAL AREA

DATE TIME	SAMPLER LAH	G.M. J	DO SAI	TEMP	FIELD		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				TURB			
					PH	EC	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH								
																				PERCENT	REACTANCE	VALUE	SI02		Y05	TM	
F0 1300.00																				SMITH RIVER NEAR CRESCENT CITY ( 3A )							
10/07/69 0710	SJ50 S050	6.45 250	10.9 101	54.0F 12.2C	8.0 8.1	156	--	--	2.5 .11 7	--	.0 .00 94	49 1.46 94	--	3.7 .10 6	--	.00 --	--		80	1							
11/04/69 0720	S050 S050	7.38 480	11.5 105	53.0F 11.7C	7.6 8.1	138	--	--	2.0 .09 7	--	.0 .00 94	79 1.37 94	--	3.3 .09 7	--	.00 --	--		67	2							
12/02/69 0815	S050 S050	7.30 445	13.3 102	40.0F 4.4C	7.6 7.8	131	--	--	1.7 .07 5	--	.0 .00 92	74 1.21 92	--	3.6 .10 8	--	.10 --	--		64	1							
01/06/70 0815	S050 S050	10.03 1540	14.0 105	38.0F 3.3C	7.0 7.1	101	--	--	1.6 .07 7	--	.0 .00 91	56 .92 91	--	2.4 .07 7	--	.00 --	--		48	2							
02/03/70 0850	S050 S050	13.54 6020	13.7 116	47.0F 8.3C	7.3 7.8	86	--	--	1.5 .07 8	--	.0 .00 93	49 .80 93	--	1.9 .05 6	--	.10 --	--		42	65							
03/10/70 0805	S050 S050		13.5 112	45.0F 7.2C	7.3 7.7	88	--	--	1.6 .07 8	--	.0 .00 93	50 .82 93	--	2.7 .08 9	--	.00 --	--		42	25							
04/07/70 0800	S050 S050	9.24 960E	13.3 113	46.0F 7.8C	7.3 8.0	107	--	--	1.8 .08 7	--	.0 .00 89	58 .95 89	--	2.6 .07 7	--	.00 --	--		50	1							
05/12/70 0645	S050 S050	12.20 4120	13.7 115	46.0F 7.8C	7.4 7.8	101	6.6 .33 31	7.7 .63 60	1.7 .07 7	.6 .02 2	.0 .00 88	56 .92 88	1.6 .03 3	3.5 .10 10	.1 .00	.00 --	--	46 50	48 2	4							
06/08/70 1415	S050 S050	8.00 728	10.9 110	61.0F 16.1C	7.9 8.2	122	--	--	2.2 .10 8	--	.0 .00	71 1.16 95	--	2.8 .08 7	--	.00 --	--		63	2							
07/06/70 1445	S050 S050	7.18 480	10.6 129	79.0F 26.1C	8.2 8.0	145	--	--	2.6 .11 8	--	.0 .00	81 1.33 92	--	1.8 .05 3	--	.00 --	--		69	1							
08/10/70 1415	S050 S050	6.54 285	10.5 119	72.0F 22.2C	8.2 7.8	155	--	--	2.6 .11 7	--	.0 .00	95 1.56 101	--	3.3 .09 6	--	.00 --	--		77	1							
09/15/70 0650	S050 S050	5.93 202	10.1 98	57.2F 14.0C	7.5 7.6	165	10 .50 28	14 1.15 65	2.5 .11 6	.9 .02 1	.0 .00 89	93 1.53 89	4.4 .09 5	3.2 .09 5	.0 .00	.00 --	--	86 82	82 6	4							
F2 1050.00																				SHASTA RIVER NEAR YREKA (1A )							
10/15/69 0705	S050 S050	3.43 192	10.2 97	50.0F 10.0C	8.2 8.3	502	--	--	4.0 1.74 35	--	.0 .00	296 4.85 97	--	22 .62 12	--	.40 --	--		201	8							
11/17/69 1430	S050 S050	3.44 196	11.5 105	47.0F 8.3C	8.3 8.3	473	--	--	3.6 1.57 33	--	.0 .00	273 4.48 95	--	23 .65 14	--	.50 --	--		171	4							
12/08/69 1310	S050 S050	3.42 191	12.7 111	44.0F 6.7C	8.3 8.4	476	--	--	3.5 1.52 32	--	5.0 .17 4	265 4.35 91	--	22 .62 13	--	.50 --	--		186	2							
01/12/70 1545	S050 S050	3.61 262	11.9 106	45.0F 7.2C	8.3 8.1	515	--	--	4.0 1.74 34	--	.0 .00	299 4.90 95	--	22 .62 12	--	.60 --	--		233	20							
02/09/70 1715	S050 S050	4.15 487	11.4 107	49.0F 9.4C	8.3 8.2	478	--	--	2.9 1.26 26	--	.0 .00	278 4.56 95	--	17 .48 10	--	.40 --	--		206	25							
03/09/70 1545	S050 S050	4.36 575	11.6 109	49.0F 9.4C	8.2 8.4	491	--	--	3.3 1.44 29	--	4.0 .13 3	273 4.48 91	--	19 .54 11	--	.50 --	--		209	30							
04/14/70 1640	S050 S050	3.41 178	11.1 108	52.0F 11.1C	8.4 8.5	554	--	--	4.1 1.78 32	--	7.0 .23 4	321 5.26 95	--	21 .59 11	--	.40 --	--		236	7							
05/12/70 1355	S050 S050	3.51 235	11.3 111	53.0F 11.7C	8.3 8.5	580	24 1.20 18	43 3.53 53	4.2 1.83 28	3.2 .08 1	9.0 .30 4	339 5.56 83	9.2 .19 3	21 .59 9	1.8 .03	.70 --	--	315 323	239 57	9							
06/16/70 1135	S050 S050	3.16 99	9.7 111	66.0F 18.9C	8.2 8.3	600	--	--	4.5 1.96 33	--	.0 .00	367 6.02 100	--	26 .73 12	--	.70 --	--		252	2							
07/13/70 1000	S050 S050	2.73 31	9.4 113	70.0F 21.1C	8.4 8.5	583	--	--	4.0 1.74 30	--	5.0 .17 3	355 5.42 100	--	24 .68 12	--	.60 --	--		254	5							
08/31/70 1110	S050 S050	2.73 29	10.5 115	67.0F 19.4C	8.5 8.3	660	39 1.95 26	41 3.37 45	4.6 2.00 27	3.6 .09 1	.0 .00	391 6.41 86	9.0 .19 3	30 .85 11	.1 .00	.70 --	--	384 365	265 55	10							

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER				MILLIGRAMS PER LITER			
						MILLIEQUIVALENTS PER LITER										PERCENT REACTANCE VALUE				B F TDS TH TURB			
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3					8	F	TDS	TH	TURB
*****																							
F2 5250.00						SCOTT RIVER NEAR FORT JONES ( 1B )																	
11/17/69 1135	5050 5050	5.54 126	12.4 113	45.0F 7.2C	7.8 7.8	252	--	--	4.0 .17 7	--	.0 .00	155 2.54 101	--	4.9 .14 6	--	.00 --	--				131	2	
01/12/70 1140	5050 5050	6.27 520	11.9 104	42.0F 5.6C	7.3 6.4	185	--	--	2.9 .13 7	--	.0 .00	108 1.77 96	--	2.6 .07 4	--	.00 --	--				99	7	
03/09/70 1200	5050 5050	7.80 1430	11.8 106	44.0F 6.7C	7.5 7.9	176	--	--	2.8 .12 7	--	.0 .00	106 1.74 99	--	1.0 .03 2	--	.10 --	--				87	55	
05/12/70 1800	5050 5050	6.54 708	11.5 109	48.0F 8.9C	7.3 8.0	167	11 .55 31	13 1.07 61	2.8 .12 7	.9 .02 1	.0 .00	98 1.61 95	1.5 .03 2	.4 .01 1	2.2 .04 2	.00 --	--	109 81	81	5			
07/13/70 1330	5050 5050	3.58 71	13.6 170	72.0F 22.2C	8.4 8.3	261	--	--	5.3 .23 9	--	.0 .00	157 2.57 98	--	3.0 .08 3	--	.00 --	--				134	3	
08/31/70 1505	5050 5050	3.53 45	12.4 155	72.0F 22.2C	8.4 8.3	276	--	--	5.6 .24 9	--	.0 .00	161 2.64 96	--	6.0 .17 6	--	.10 --	--				139	2	
F3 1100.00						KLAMATH RIVER NEAR KLAMATH ( 3 )																	
10/07/69 0900	5050 5000	6.05 2910	10.5 101	57.0F 13.9C	8.0 8.1	221	19 .95 41	9.5 .78 34	12 .52 23	1.8 .05 2	.0 .00	113 1.85 81	14 .29 13	5.2 .15 7	.1 .00	.00 19.0				86 6	2		
11/04/69 0910	5050 5000	5.01 4330	10.7 100	55.0F 12.8C	7.7 8.0	233	18 .90 38	9.4 .77 32	15 .65 27	2.2 .06 3	.0 .00	113 1.85 76	19 .40 17	4.8 .14 6	1.9 .03 1	.05 24.0				84 9	5		
12/01/69 1530	5050 5000	5.02 4850	13.4 111	45.0F 7.2C	7.8 7.8	215	18 .90 40	9.5 .78 35	12 .52 23	1.9 .05 2	.0 .00	106 1.74 80	14 .29 13	3.6 .10 5	2.4 .04 2	.05 26.0				84 3	7		
01/05/70 1700	5050 5000	7.86 12800	13.6 106	41.0F 5.0C	7.3 7.6	166	16 .80 47	7.4 .61 36	6.2 .27 16	1.0 .03 2	.0 .00	86 1.41 84	9.0 .19 11	1.8 .05 3	1.4 .02 1	.03 18.0				70 0	33		
02/03/70 1050	5050 5000	15.81 60500	13.3 110	45.0F 7.2C	7.4 7.8	141	14 .70 47	6.4 .53 36	5.1 .22 15	1.1 .03 2	.0 .00	74 1.21 85	7.0 .15 10	1.6 .05 3	1.0 .02 1	.02 16.0				62 1	180		
03/10/70 0950	5050 5000	12.31 34700	11.8 100	47.0F 8.3C	7.4 7.8	161	17 .85 49	7.4 .61 35	5.5 .24 14	1.2 .03 2	.0 .00	85 1.39 82	10 .21 12	3.2 .09 5	.3 .00	.01 15.0				73 4	85		
04/07/70 0935	5050 5000	12.24 12000	12.3 110	51.0F 12.5C	7.6 7.9	160	17 .85 50	7.2 .59 35	5.6 .24 14	1.0 .03 2	.0 .00	85 1.39 85	8.0 .17 10	2.8 .08 5	.0 .00	.04 14.0				72 3	10		
05/11/70 1815	5050 5000	8.33 12800	11.8 107	52.0F 11.1C	7.6 7.8	145	14 .70 47	6.6 .54 36	5.0 .22 15	.9 .02 1	.0 .00	74 1.21 79	13 .27 18	2.1 .06 4	.1 .00	.04 12.0				62 2	25		
06/08/70 1250	5050 5000	7.27 8300	9.8 105	66.2F 19.0C	7.6 7.6	169	17 .85 47	7.5 .62 34	7.2 .31 17	1.3 .03 2	.0 .00	84 1.38 79	14 .29 17	2.7 .08 5	.0 .00	.04 15.0				74 5	4		
07/06/70 1330	5050 5000	5.78 4000	8.3 97	75.0F 23.9C	8.0 7.8	206	21 1.05 49	8.8 .72 33	8.0 .35 16	1.7 .04 2	.0 .00	108 1.77 83	14 .29 14	2.4 .07 3	.1 .00	.01 16.0				88 0	22		
08/10/70 1245	5050 5000	5.16 2520	9.5 104	73.4F 23.0C	8.2 7.9	245	22 1.10 43	9.8 .81 32	14 .61 24	2.0 .05 2	.0 .00	119 1.95 77	21 .44 17	5.2 .15 6	.0 .00	.02 7.8				96 2	1		
09/14/70 1415	5050 5000	5.33 2360	10.3 106	63.2F 17.2C	8.2 8.1	247	21 1.05 42	9.4 .77 31	14 .61 24	2.2 .06 2	.0 .00	114 1.87 76	19 .40 16	4.3 .12 5	--	.05 14.0				91 3	9		
F3 1220.01						KLAMATH RIVER AT ORLEANS ( 2C )																	
10/06/69 1210	5050 5050	2.80 1150	12.2 120	57.0F 13.9C	8.3 8.0	223	--	--	15 .65 29	--	.0 .00	111 1.82 82	--	6.7 .19 9	--	.10 --	--				81	2	
11/03/69 1405	5050 5050	3.73 2620	12.1 115	54.0F 12.2C	8.0 7.9	247	--	--	20 .87 35	--	.0 .00	116 1.90 77	--	6.4 .18 7	--	.10 --	--				82	4	
12/01/69 1315	5050 5050	4.38 3940	14.0 115	43.0F 6.1C	8.0 7.7	210	--	--	15 .65 31	--	.0 .00	102 1.67 80	--	6.5 .18 9	--	.20 --	--				72	3	
01/05/70 1445	5050 5050	6.80 8000	14.8 113	39.0F 3.3C	7.3 7.3	170	--	--	8.8 .38 22	--	.0 .00	84 1.38 81	--	3.5 .10 6	--	.10 --	--				67	20	
02/02/70 1235	5050 5050	12.65 29400	14.5 112	43.0F 6.1C	7.4 7.6	148	--	--	6.5 .28 19	--	.0 .00	79 1.30 88	--	1.9 .05 3	--	.20 --	--				62	220	
03/09/70 1350	5050 5050	15.19 19100	13.4 115	46.0F 7.8C	7.6 8.0	150	--	--	7.7 .33 22	--	.0 .00	82 1.34 89	--	3.1 .09 6	--	.10 --	--				61	80	



TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. J	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER					MILLIGRAMS PER LITER				
						MILLIEQUIVALENTS PER LITER										PERCENT REACTANCE VALUE					H F TDS TM TURB				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3		8	F	SUM	NCM						
F3 1220.01						KLAMATH RIVER AT ORLEANS ( 2C )										CONTINUED									
04/06/70	5050	5.63	12.7	50.0F	7.6		--	--	6.9	--	.0	85	--	2.5	--	.20	--				68	8			
1250	5050	7040	114	10.0C	8.0	164			.30		.00	1.39		.07											
									18			85		4											
05/11/70	5050	5.43	12.0	48.0F	7.6		14	6.6	6.2	1.2	.0	76	9.7	3.2	.2	.10	--		95	62	8				
1230	5050	6610	112	4.9C	8.1	152	.70	.54	.27	.03	.00	1.25	.20	.09	.00				79	1					
							45	35	18	2		81	13	6											
06/08/70	5050	4.74	10.1	63.0F	7.9		--	--	8.5	--	.0	77	--	2.8	--	.10	--				61	10			
1035	5050	5270	106	17.2C	8.2	152			.37		.00	1.26		.08											
									24			83		5											
07/06/70	5050	2.48	9.3	73.0F	8.0		--	--	12	--	.0	106	--	3.5	--	.00	--				84	2			
1100	5050	2550	109	22.8C	8.0	218			.52		.00	1.74		.10											
									24			80		5											
08/10/70	5050	1.68	9.3	73.0F	8.0		--	--	19	--	.0	127	--	7.1	--	.10	--				95	4			
1015	5050	1700	109	22.8C	7.6	270			.83		.00	2.04		.20											
									31			77		7											
09/14/70	5050	1.39	11.0	60.8F	8.0		17	9.8	17	2.8	.0	112	19	5.5	.7	.00	--		144	83	10				
1150	5050	1830	112	16.0C	8.3	238	.85	.81	.74	.07	.00	1.84	.40	.16	.01				128	9					
							34	33	30	3		76	17	7											
F3 1430.00						KLAMATH RIVER NEAR SEIAD VALLEY ( 2B )																			
10/14/69	5050		12.0	57.0F	8.4		--	--	20	--	.0	122	--	6.4	3.9	.20	--				86	2			
1420	5050	1750	121	13.9C	8.1	258			.87		.00	2.00		.18	.06										
									34			78		7	2										
11/17/69	5050		11.6	48.0F	8.2		--	--	19	--	.0	106	--	6.1	3.5	.10	--				76	5			
1240	5050	3350	105	8.9C	7.8	227			.83		.00	1.74		.17	.06										
									37			77		7	3										
12/08/69	5050		12.7	43.0F	7.6		--	--	16	--	.0	105	--	7.4	5.6	.20	--				71	5			
1540	5050	2990	107	6.1C	7.8	212			.70		.00	1.72		.21	.09										
									33			81		10	4										
01/12/70	5050		12.8	40.0F	7.6		--	--	17	--	.0	110	--	4.7	3.9	.20	--				81	15			
1255	5050	4280	104	4.4C	6.4	224			.74		.00	1.80		.13	.06										
									33			80		6	3										
02/09/70	5050		12.9	46.0F	7.6		--	--	17	--	.0	109	--	3.0	3.1	.10	--				73	45			
1350	5050	9190	114	7.8C	7.6	186			.52		.00	1.79		.08	.05										
									28			96		4	3										
03/09/70	5050		12.7	46.0F	7.8		--	--	13	--	.0	108	--	4.3	.4	.20	--				78	45			
1250	5050	8840	112	7.8C	8.3	208			.57		.00	1.77		.12	.01										
									27			85		6											
04/14/70	5050		12.8	49.0F	8.2		--	--	15	--	.0	108	--	6.5	.3	.10	--				90	9			
1430	5050	3280	114	9.4C	8.5	231			.65		.30	1.77		.18	.00										
									28		13	77		8											
05/12/70	5050		12.8	49.0F	8.3		10	17	17	2.4	.0	125	21	4.3	1.4	.10	--		170	96	5				
1630	5050	3130	117	9.4C	7.8	256	.50	1.40	.74	.06	.00	2.05	.44	.12	.02				136	8					
							19	52	27	2		78	17	5	1										
06/16/70	5050		11.0	65.0F	8.4		--	--	16	--	.0	122	--	6.6	1.8	.20	--				97	3			
1400	5050	1910	122	18.3C	8.3	252			.70		.00	2.00		.19	.03										
									28			79		8	1										
07/13/70	5050		10.8	71.0F	8.2		--	--	21	--	.0	130	--	6.5	.1	.20	--				101	3			
1230	5050	1100	128	21.6C	8.3	276			.91		.00	2.13		.18	.00										
									33			77		7											
08/03/70	5050		10.2	72.0F	8.4		--	--	24	--	.0	126	--	7.7	--	.20	--				98	2			
1325	5050	1280	122	22.2C	7.7	300			1.04		.00	2.07		.22											
									35			69		7											
08/31/70	5050		11.2	74.0F	8.4		16	13	26	3.2	.0	128	36	8.1	.1	.20	--		186	95	8				
1355	5050	1170	133	23.3C	8.3	307	.80	1.07	1.13	.08	.00	2.10	.75	.23	.00				167	12					
							26	35	37	3		68	24	7											
F3 1470.00						KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE ( 1C )																			
11/17/69	5050		11.3	49.0F	8.4		--	--	20	--	.0	105	--	6.6	3.6	.10	--				70	4			
1345	5050	3160E	104	9.4C	7.9	225			.87		.00	1.72		.19	.06										
									39			76		8	3										
01/12/70	5050		12.9	39.0F	7.6		--	--	21	--	.0	111	--	5.3	5.0	.20	--				76	28			
1340	5050	3200E	103	3.9C	7.2	235			.91		.00	1.82		.15	.08										
									39			77		6	3										
03/09/70	5050		12.7	46.0F	8.0		--	--	18	--	.0	109	--	5.0	.2	.20	--				77	40			
1345	5050	5680E	112	7.8C	8.3	224			.78		.00	1.79		.14	.00										
									35			80		6											
05/12/70	5050		12.8	50.0F	8.2		17	16	27	3.3	.0	144	35	6.2	1.6	.20	--		194	107	3				
1555	5050	1560E	116	10.0C	8.0	31																			

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				TDS SUM	TH NCH	TURB
						PERCENT REACTANCE VALUE				PERCENT REACTANCE VALUE						B		F								
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	NO3	NO3	NO3	NO3	NO3	NO3	NO3					
*****																										
F3 1470.00						KLAMATH RIVER ABOVE HAMBURG RESERVOIR										CONTINUED										
						SITE ( 1C )																				
08/31/70	5050		11.6	73.0F	8.5	--	--	26	--	.0	128	--	8.7	.6	.20	--			93	2						
1310	5050	1050E	140	22.8C	7.9			1.13		.00	2.10		.25	.01	--											
					310			36			68		8													
F3 1600.00						KLAMATH RIVER BELOW IRON GATE DAM ( 1F )																				
10/15/69	5050		6.3	56.0F	7.1	--	--	19	--	.0	90	--	3.0	5.3	.10	--			63	0						
0750	5050	1310	64	13.3C	7.7			.83		.00	1.48		.08	.09	--											
					217			38			68		4	4												
11/17/69	5050		8.9	49.0F	7.3	--	--	19	--	.0	89	--	4.6	3.2	.10	--			60	4						
1530	5050	2970	83	9.4C	7.3			.83		.00	1.46		.13	.05	--											
					201			41			73		6	2												
12/08/69	5050		10.5	43.0F	7.3	--	--	15	--	.0	79	--	4.8	5.4	.10	--			65	6						
1350	5050	1690	91	6.1C	7.4			.65		.00	1.30		.14	.09	--											
					172			38			76		8	5												
01/12/70	5050		12.7	37.0F	7.3	--	--	20	--	.0	92	--	5.6	5.7	.10	--			62	14						
1450	5050	2940	99	2.8C	7.0			.87		.00	1.51		.16	.09	--											
					208			42			73		8	4												
02/09/70	5050		13.8	42.0F	7.5	--	--	15	--	.0	84	--	2.9	4.2	.10	--			45	25						
1600	5050	5240	118	5.6C	7.6			.65		.00	1.38		.08	.07	--											
					154			42			90		5	5												
03/09/70	5050		13.8	46.0F	7.7	--	--	18	--	.0	88	--	4.8	.1	.10	--			55	25						
1500	5050	5110	124	7.8C	8.3			.78		.00	1.44		.14	.00	--											
					183			43			74		8													
04/14/70	5050		12.3	51.0F	8.2	--	--	22	--	.0	105	--	5.8	.7	.20	--			78	7						
1600	5050	1360	118	10.5C	8.3			.96		.00	1.72		.16	.01	--											
					237			41			73		7													
05/12/70	5050		12.8	52.0F	8.4	11	15	29	3.9	.0	115	46	4.9	1.9	.10	--		214	88	2						
1445	5050	1330	125	11.1C	7.9	.55	1.23	1.26	.10	.00	1.89	.96	.14	.03	--			169	6							
					297	18	39	40	3		63	32	5	1												
06/16/70	5050		13.4	66.0F	8.4	--	--	29	--	5.0	105	--	6.9	3.1	.20	--			90	2						
1215	5050	710	154	18.9C	8.4			1.26		.17	1.72		.19	.05	--											
					304			41		6	57		6	2												
07/13/70	5050		12.6	72.0F	8.4	--	--	26	--	3.0	104	--	5.8	1.6	.20	--			85	3						
1040	5050	721	154	22.2C	8.4			1.13		.10	1.71		.16	.03	--											
					274			41		4	62		6	1												
08/03/70	5050		9.7	72.0F	8.4	15	12	29	4.0	.0	114	44	6.5	.9	.00	--		187	88	1						
1030	5050	1040	118	22.2C	8.3	.75	.99	1.26	.10	.00	1.87	.92	.18	.01	--			168	7							
					295	24	32	41	3		63	31	6													
08/31/70	5050		9.7	71.0F	8.4	--	--	25	--	.0	111	--	5.8	.7	.20	--			79	2						
1150	5050	1020	117	21.6C	8.0			1.09		.00	1.82		.16	.01	--											
					281			39			65		6													
F3 4100.00						SALMON RIVER AT SOMESBAR ( 2A )																				
01/05/70	5050	3.77	14.8	37.0F	7.1	--	--	1.9	--	.0	51	--	1.0	--	.10	--			53	2						
1410	5050	1090	111	2.8C	7.2			.08		.00	1.00		.03		--											
					114			7			88		3													
05/11/70	5050	6.69	13.1	45.0F	7.3	10	1.9	1.7	.9	.0	39	3.1	1.0	.1	.00	--		52	33	5						
1330	5050	1750	111	7.2C	7.5	.50	.16	.07	.02	.00	.64	.06	.03	.00	--			38	1							
					74	67	21	9	3		88	8	4													
F4 1090.00						TRINITY RIVER NEAR HOOPA ( 4 )																				
10/06/69	5050	13.21	15.0	61.0F	8.3	--	--	3.4	--	.0	114	--	3.9	1.1	.10	--			106	1						
1050	5050	307	153	16.1C	8.3			.15		.00	1.95		.11	.02	--											
					219			7			89		5	1												
11/03/69	5050	13.62	11.9	56.0F	8.0	--	--	4.3	--	.0	110	--	5.8	.6	.00	--			101	2						
1230	5050	761	114	13.3C	8.1			.19		.00	1.80		.16	.01	--											
					212			9			85		8													
12/01/69	5050	13.52	12.3	45.0F	7.3	--	--	4.0	--	.0	111	--	6.0	.4	.10	--			100	2						
1130	5050	679	103	7.2C	8.1			.17		.00	1.82		.17	.01	--											
					215			8			85		8													
01/05/70	5050	16.44	13.1	40.0F	7.1	--	--	3.2	--	.0	95	--	2.5	.9	.10	--			86	47						
1215	5050	4500	102	4.4C	7.3			.14		.00	1.56		.07	.01	--											
					178			8			88		4	1												
02/02/70	5050	23.16	13.0	46.0F	7.3	--	--	2.6	--	.0	83	--	1.8	.5	.10	--			72	180						
1120	5050	17500	110	7.8C	7.4			.11		.00	1.36		.05	.01	--											
					146			8			93		3	1												
03/09/70	5050	20.48	12.2	47.0F	7.3	--	--	2.6	--	.0	82	--	1.7	.4	.00	--			70	140						
1240	5050	10100	105	8.3C	7.8			.11		.00	1.34		.05	.01	--											
					144			8			93		3	1												
04/06/70	5050	17.25	11.7	52.0F	7.5	--	--	3.1	--	.0	95	--	2.1	.1	.00	--			91	20						
1145	5050	3600	107	11.1C	8.0			.13		.00	1.56		.06	.01	--											
					177			7			88		3													
05/11/70	5050	16.61	12.2	49.0F	7.5	15	8.4	2.2	.9	.0	82	7.1	3.1	.2	.10	--		73	72	6						
1130	5050	3000	107	9.4C	8.1	.75	.69	.10	.02	.00	1.34	.15	.09	.00	--			78	5							
					148	48	44	6	1		85	9	6													
06/08/70	5050	15.58	9.5	63.0F	7.6	--	--	3.0	--	.0	86	--	1.8	.1	.00	--			77	10						
0925	5050	1710	99	17.2C	8.2			.13		.00	1.41		.05	.00	--											
					154			8			92		3													

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUTENTS IN										MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER			
						PERCENT				REACTANCE				VALU		R		F		TDS		TH		TURB			
						CA	MG	NA	K	CO3	HC03	504	CL	N03	5102	SUM	NCM	TURB									
F4 1090.00						TRINITY RIVER NEAR HOOPA ( 4 )										CONTINUED											
07/06/70 1000	5050 5050	14.70 1050	8.9 101	71.0F 21.6C	7.4 8.1	190	--	--	3.8 .17 9	--	.0 .00	101 1.66 87	--	2.2 .06 3	.3 .00	.00 --	--	--	90	1							
08/10/70 0915	5050 5050	13.82 482	9.0 99	68.0F 20.0C	7.0 7.9	216	--	--	3.7 .16 7	--	.0 .00	127 2.08 96	--	4.1 .12 6	.2 .00	.10 --	--	--	104	2							
09/14/70 1045	5050 5050	13.69 420	9.8 104	64.4F 18.0C	7.9 8.0	211	27 1.35 61	7.7 .63 28	4.5 .70 9	1.4 .04 2	.0 .00	108 1.77 83	10 .21 10	5.0 .14 7	.1 .00	.00 --	--	112 110	99 11	2							
F4 1376.00						TRINITY RIVER NEAR BURNT RANCH ( 4B )																					
11/03/69 1055	5050 5050	430	11.9 110	51.0F 12.5C	7.7 8.0	157	--	--	4.4 .19 12	--	.0 .00	83 1.36 87	--	6.8 .19 12	.0 .00	.00 --	--	--	71	2							
01/05/70 1115	5050 5050	1150	13.8 105	37.0F 2.8C	7.3 7.4	158	--	--	3.2 .14 9	--	.0 .00	86 1.41 89	--	3.8 .11 7	.4 .01 1	.10 --	--	--	74	3							
03/09/70 1130	5050 5050	3010	12.5 108	46.0F 7.8C	7.5 7.9	138	--	--	2.6 .11 8	--	.0 .00	80 1.31 95	--	2.0 .06 4	.1 .00	.00 --	--	--	66	12							
05/11/70 1005	5050 5050	1050	11.7 111	53.0F 11.7C	7.6 8.1	126	15 .75 57	5.2 .43 33	2.6 .11 8	.9 .02 2	.0 .00	68 1.12 83	5.1 .11 8	4.1 .12 9	.1 .00	.00 --	--	66 67	59 3	1							
07/06/70 0850	5050 5050	510	9.0 105	72.0F 22.2C	7.6 7.8	123	--	--	3.2 .14 11	--	.0 .00	65 1.07 87	--	2.4 .07 6	.1 .00	.00 --	--	--	55	1							
09/14/70 0945	5050 5050	280	10.1 101	59.0F 15.0C	7.7 8.0	154	16 .80 50	6.8 .56 35	4.5 .20 13	1.0 .03 2	.0 .00	79 1.30 86	2.1 .04 3	6.0 .17 11	.4 .01 1	.00 --	--	81 76	68 3	5							
F4 1640.00						TRINITY RIVER AT LEWISTON ( 4A )																					
11/03/69 0930	5050 5050	3.35 242	10.7 99	49.0F 9.4C	7.3 7.8	94	--	--	2.2 .10 11	--	.0 .00	54 .89 95	--	2.4 .07 7	.1 .00	.00 --	--	--	43	3							
01/05/70 0930	5050 5050	2.97 155	9.6 79	40.0F 4.4C	7.1 7.1	97	--	--	2.6 .11 11	--	.0 .00	55 .90 93	--	1.5 .04 4	.5 .01 1	.10 --	--	--	43	7							
03/09/70 0955	5050 5050	2.94 148	12.1 106	45.0F 7.2C	7.1 7.3	80	--	--	2.1 .09 11	--	.0 .00	47 .77 96	--	1.7 .05 6	.2 .00	.10 --	--	--	36	12							
05/11/70 0840	5050 5050	2.99 160	12.4 112	47.0F 8.3C	7.5 8.0	83	4.3 .21 24	6.7 .55 63	2.1 .09 10	.9 .02 2	.0 .00	46 .75 89	1.8 .04 5	1.8 .05 6	.2 .00	.10 --	--	44 41	38 1	5							
07/06/70 0730	5050 5050	2.99 155	11.0 97	45.0F 7.2C	7.1 7.6	86	--	--	2.8 .12 14	--	.0 .00	48 .79 92	--	.4 .01 1	.1 .00	.00 --	--	--	38	2							
09/14/70 0830	5050 5050	3.21 195	10.6 96	47.0F 8.3C	7.1 7.9	79	--	--	2.2 .10 13	--	.0 .00	47 .77 97	--	1.6 .05 6	.1 .00	.10 --	--	--	37	1							
F5 1100.00						MAD RIVER AT ARCATA ( 6A )																					
10/07/69 1050	5050 5050	3.23 32	10.9 106	58.0F 14.4C	7.9 8.1	196	--	--	4.7 .20 10	--	.0 .00	106 1.74 89	--	3.5 .10 5	--	.10 --	--	--	94	1							
11/04/69 1055	5050 5050	3.57 53	11.1 107	57.0F 13.9C	7.8 8.1	200	--	--	4.5 .20 10	--	.0 .00	103 1.69 85	--	3.0 .08 4	--	.10 --	--	--	93	5							
12/02/69 1130	5050 5050	4.58 183	13.1 108	45.0F 7.2C	7.6 7.6	155	--	--	3.2 .14 9	--	.0 .00	78 1.28 83	--	2.6 .07 5	--	.10 --	--	--	71	3							
01/06/70 1100	5050 5050	6.16 693	13.6 105	40.0F 4.4C	7.4 7.3	128	--	--	2.9 .13 10	--	.0 .00	63 1.03 80	--	1.9 .05 4	--	.00 --	--	--	57	33							
02/03/70 1310	5050 5050	8.71 2450	12.7 111	49.0F 9.4C	7.3 7.2	98	--	--	2.7 .12 12	--	.0 .00	49 .80 82	--	2.5 .07 7	--	.10 --	--	--	43	200							
03/10/70 1205	5050 5050	8.22 2340	12.8 111	49.0F 9.4C	7.4 7.6	98	--	--	3.2 .14 14	--	.0 .00	49 .80 82	--	2.2 .06 6	--	.00 --	--	--	43	190							
04/07/70 1125	5050 5050	6.04 533	13.1 119	52.0F 11.1C	7.8 8.1	156	--	--	3.5 .15 10	--	.0 .00	77 1.26 81	--	3.3 .09 6	--	.00 --	--	--	69	12							
05/12/70 0930	5050 5050	7.02 1130	12.3 109	50.0F 10.0C	7.3 7.6	114	15 .75 64	2.6 .21 18	3.8 .17 15	1.4 .04 3	.0 .00	52 .85 74	7.2 .15 13	4.8 .14 12	.5 .01 1	.10 --	--	80 61	48 6	60							
06/09/70 0840	5050 5050	4.28 78	10.1 100	59.0F 15.0C	7.4 7.8	195	--	--	5.3 .73 12	--	.0 .00	102 1.67 86	--	2.1 .06 3	--	.10 --	--	--	91	3							

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. W	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B 5102	F 5102	TDS SUM	TH NCH	TURB	
.....																				
F5 1100.00		MAD RIVER AT ARCATA ( 6A )										CONTINUED								
07/07/70	5050	3.78	9.1	64.0F	7.7	299	--	--	8.7	--	.0	147	--	3.9	--	.10	--	137	1	
0800	5050	25	95	17.8C	8.2				.38		.00	2.41		.11		--				
									13			81		4						
09/15/70	5050	3.76	10.8	55.0F	7.8	202	--	--	4.3	--	.0	109	--	2.9	--	.10	--	95	10	
1010	5050	26	101	12.8C	8.1				.19		.00	1.79		.08		--				
									9			89		4						
F5 5100.00		REDWOOD CREEK AT ORICK ( 3B )																		
10/07/69	5050	4.08	11.1	54.0F	7.3	162	--	--	5.5	--	.0	72	--	8.3	--	.10	--	69	2	
0955	5050	23E	103	12.2C	7.8				.24		.00	1.18		.23		--				
									15			73		14						
11/04/69	5050	4.41	11.9	55.0F	7.3	188	--	--	5.2	--	.0	76	--	6.8	--	.00	--	81	2	
1005	5050	58	112	12.8C	8.1				.23		.00	1.25		.19		--				
									12			66		10						
12/02/69	5050	4.46	14.0	44.0F	7.6	174	--	--	4.4	--	.0	72	--	6.3	--	.10	--	74	3	
1030	5050	65	114	6.7C	7.6				.19		.00	1.18		.18		--				
									11			68		10						
01/06/70	5050	6.42	13.3	40.0F	7.1	102	--	--	2.9	--	.0	42	--	3.0	--	.00	--	42	35	
1010	5050	700	102	4.4C	7.1				.13		.00	.69		.08		--				
									13			68		8						
02/03/70	5050	8.47	12.7	48.0F	7.1	78	--	--	2.6	--	.0	33	--	3.1	--	.10	--	31	210	
1210	5050	1860	109	8.9C	7.1				.11		.00	.54		.09		--				
									14			69		12						
03/10/70	5050	8.31	12.2	48.0F	7.2	88	--	--	3.2	--	.0	39	--	3.7	--	.00	--	36	180	
1100	5050	1840	105	8.9C	7.4				.14		.00	.64		.10		--				
									16			73		11						
04/07/70	5050	6.73	12.5	49.0F	7.3	115	--	--	3.2	--	.0	48	--	4.6	--	.00	--	48	7	
1030	5050	450	109	9.4C	7.8				.14		.00	.79		.13		--				
									12			69		11						
05/12/70	5050	9.54	12.5	48.0F	7.3	103	14	2.2	3.2	1.4	.0	42	9.2	4.9	.6	.10	--	56	44	
0840	5050	290E	108	8.9C	7.6			.70	.18	.14	.04	.00	.69	.19	.14	.01	--	57	10	
								66	17	13	4		67	18	14	1				
06/09/70	5050	5.88	10.3	56.0F	7.3	138	--	--	4.7	--	.0	65	--	4.0	--	.00	--	63	8	
0745	5050	170E	98	13.3C	7.8				.20		.00	1.07		.11		--				
									14			78		8						
07/07/70	5050	5.19	9.9	59.0F	7.3	164	--	--	4.8	--	.0	73	--	4.7	--	.00	--	70	2	
0700	5050	95E	98	15.0C	7.7				.21		.00	1.20		.13		--				
									13			73		8						
08/11/70	5050	5.19	8.9	59.0F	7.1	171	--	--	4.9	--	.0	78	--	7.0	--	.00	--	74	1	
0705	5050	28	88	15.0C	7.6				.21		.00	1.28		.20		--				
									12			75		12						
09/14/70	5050	4.86	10.2	54.0F	7.1	164	--	--	5.7	--	.0	72	--	7.0	--	.10	--	69	2	
0915	5050	19E	95	12.2C	7.8				.25		.00	1.18		.20		--				
									15			72		12						
F6 1100.00		EEL RIVER AT SCOTIA ( 6 )																		
10/07/69	5050	8.36	13.9	63.0F	8.4	322	39	13	10	1.5	.0	172	23	7.6	.0	.07	.1	151	1	
1340	5000	115	143	17.2C	8.3			1.95	1.07	.44	.04	.00	2.82	.48	.21	.00		8.5	189	10
								56	31	13	1		80	14	6					
11/04/69	5050	8.78	11.4	62.0F	8.2	314	40	11	8.3	1.3	.0	156	29	8.0	.0	.11	.1	146	1	
1335	5000	247	116	16.7C	8.3			2.00	.90	.36	.03	.00	2.56	.60	.23	.00		7.3	183	17
								61	27	11	1		76	18	7					
12/02/69	5050	8.91	12.7	51.0F	8.3	321	41	12	8.9	1.4	.0	157	29	5.5	.1	.15	.1	152	3	
1425	5000	295	113	10.5C	8.1			2.05	.99	.39	.04	.00	2.57	.60	.16	.00		8.1	185	24
								59	29	11	1		77	18	5					
01/06/70	5050		13.2	42.0F	7.4	194	23	7.2	5.8	1.0	.0	97	15	2.1	.3	.06	.2	87	24	
1545	5000	9000E	105	5.6C	7.7			1.15	.59	.25	.03	.00	1.59	.31	.06	.00		11.0	114	8
								57	29	12	1		81	16	3					
02/03/70	5050	14.88	12.4	49.0F	7.5	149	18	5.1	4.8	.9	.0	76	9.0	1.8	.4	.04	.1	66	100	
1550	5000	10500E	108	9.4C	7.8			.90	.42	.21	.02	.00	1.25	.19	.05	.01		11.0	89	4
								58	27	14	1		83	13	3	1				
03/10/70	5050	15.72	12.1	50.0F	7.6	138	17	5.5	4.7	1.6	.0	71	11	2.4	.5	.04	.0	65	180	
1430	5000	15000E	107	14.0C	7.9			.85	.45	.20	.04	.00	1.16	.23	.07	.01		10.0	88	7
								55	29	13	3		74	16	5	1				
04/07/70	5050	11.43	11.4	58.0F	7.9	215	27	7.8	6.4	1.1	.0	112	17	3.4	.0	.07	.3	100	5	
1400	5000	2380E	111	14.4C	8.0			1.35	.64	.28	.03	.00	1.84	.35	.10	.00		10.0	129	8
								59	28	12	1		80	15	4					
05/12/70	5050	10.26	12.0	58.0F	8.1	228	27	8.1	6.5	1.1	.0	114	19	3.6	.0	.07	.1	101	10	
1415	5000	1150E	117	14.4C	8.2			1.35	.67	.28	.03	.00	1.94	.40	.10	.00		9.9	134	4
								58	29	12	1		83	16	4					
06/09/70	5050		11.8	62.6F	8.2	272	34	10	7.8	1.4	.0	143	22	5.2	.0	.20	.2	126	1	
1100	5000	570E	122	17.0C	8.1			1.70	.42	.34	.04	.00	2.35	.46	.15	.00		13.0	165	9
								59	28	12	1		79	16	5					
07/07/70	5050		12.5	71.0F	8.4	299	36	11	8.8	1.7	.0	152	22	4.6	.0	.19	.2	135	7	
1030	5000	275	141	21.6C	8.0			1.40	.90	.38	.04	.00	2.49	.46	.13	.00		7.2	167	11
								58	29	12	1		81	15	4					

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. Q	OO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	PERCENT HCO3	REACTANCE SO4	VALUE CL	NO3	B 5102	F TDS SUM	TH NCM	TURB		
F6 1100.00						EEL RIVER AT SCOTIA ( 6 )					CONTINUED									
08/11/70 1015	5050 5000		10.7 121	73.4F 23.0C	8.1 8.1	324	41 2.05 58	12 .99 28	9.8 .43 12	1.6 .04 1	.0 .00	170 2.79 81	22 .46 13	7.0 .20 6	.0 .00	.00 7.2	.1 186	152 13	0	
09/15/70 1455	5050 5000		12.1 126	64.0F 17.8C	8.2 8.3	325	41 2.05 57	13 1.07 30	9.5 .41 11	1.7 .04 1	.0 .00	165 2.71 83	22 .46 14	7.2 .20 6	-- .01	.3 8.0	156 185	21	8	
F6 1154.50						EEL RIVER AT SOUTH FORK ( 5 )														
10/07/69 1430	5050 5050		10.3 108	64.0F 17.8C	7.9 8.2	325	-- --	-- --	7.5 .33 10	-- .00	.0 .00	158 2.59 80	-- --	7.4 .21 6	-- .20	-- --		156	1	
11/04/69 1430	5050 5050		10.4 103	59.0F 15.0C	7.7 8.3	330	-- --	-- --	8.0 .35 11	-- .00	.0 .00	146 2.39 72	-- --	10 .28 8	-- .30	-- --		153	2	
12/02/69 1530	5050 5050		12.7 110	44.0F 8.9C	7.6 7.9	316	-- --	-- --	7.0 .30 9	-- .00	.0 .00	146 2.39 76	-- --	8.2 .23 7	-- .30	-- --		148	1	
01/07/70 0855	5050 5050		13.3 163	40.0F 4.4C	7.3 7.4	187	-- --	-- --	4.6 .20 11	-- .00	.0 .00	93 1.53 82	-- --	2.5 .07 4	-- .10	-- --		85	24	
02/04/70 0840	5050 5050		12.4 108	48.0F 8.9C	7.8 7.9	149	-- --	-- --	3.7 .16 11	-- .00	.0 .00	78 1.28 86	-- --	1.6 .05 3	-- .20	-- --		69	240	
03/10/70 1520	5050 5050		12.4 109	49.0F 9.4C	7.9 8.0	138	-- --	-- --	4.0 .17 12	-- .00	.0 .00	74 1.21 88	-- --	1.6 .05 4	-- .00	-- --		64	250	
04/08/70 0845	5050 5050		11.5 108	54.0F 12.2C	7.8 8.2	216	-- --	-- --	5.0 .22 10	-- .00	.0 .00	110 1.80 83	-- --	3.5 .10 5	-- .10	-- --		99	7	
05/12/70 1500	5050 5050		11.3 112	59.0F 15.0C	8.0 8.2	226	29 1.45 58	8.1 .67 27	8.1 .35 14	1.0 .03 1	.0 .00	113 1.85 78	19 .40 17	4.4 .12 5	.1 .00	.20 --	117 126	106 14	6	
06/09/70 1210	5050 5050		9.6 102	65.0F 14.3C	8.0 8.3	259	-- --	-- --	6.8 .30 12	-- .00	.0 .00	135 2.21 85	-- --	3.0 .08 3	-- .10	-- --		129	6	
07/07/70 1120	5050 5050		9.5 106	69.0F 20.5C	8.2 7.9	225	-- --	-- --	9.6 .42 19	-- .00	.0 .00	119 1.95 87	-- --	3.2 .09 4	-- .00	-- --		106	1	
08/11/70 1200	5050 5050		8.0 94	74.0F 23.3C	7.9 7.8	329	-- --	-- --	8.0 .35 11	-- .00	.0 .00	161 2.64 80	-- --	5.9 .17 5	-- .20	-- --		154	1	
09/15/70 1540	5050 5050		10.1 106	64.0F 17.8C	8.0 8.2	345	-- --	-- --	9.8 .43 12	-- .00	.0 .00	171 2.80 81	-- --	7.2 .20 6	-- .20	-- --		166	1	
F6 1329.50						EEL RIVER ABOVE OUTLET CREEK ( 5D )														
10/08/69 0850	5050 5050		1.77 5.6	9.7 99	59.0F 15.0C	8.0 8.2	-- 267	-- --	8.9 .39 15	-- .00	.0 .00	124 2.03 76	-- --	5.7 .16 6	.1 .00	.40 --		115	1	
11/05/69 0810	5050 5050		2.94 83	10.2 100	56.0F 13.3C	8.1 8.1	-- 278	-- --	9.9 .43 15	-- .00	.0 .00	122 2.00 72	-- --	9.4 .27 10	.2 .00	.50 --		122	10	
12/03/69 0950	5050 5050		1.97 80E	12.4 100	41.0F 5.9C	8.1 8.2	-- 288	-- --	8.9 .39 14	-- .00	.0 .00	132 2.16 75	-- --	9.4 .27 9	.1 .00	.70 --		127	1	
01/07/70 1150	5050 5050		2.86 273	13.4 103	38.0F 7.3C	7.4 7.4	-- 160	-- --	4.6 .20 13	-- .00	.0 .00	79 1.30 81	-- --	2.1 .06 4	-- .20	-- --		72	91	
02/04/70 1130	5050 5050		5.70 1900	12.3 109	48.0F 8.9C	7.5 7.5	-- 120	-- --	3.8 .17 14	-- .00	.0 .00	65 1.97 49	-- --	1.8 .05 4	.2 .00	.10 --		54	150	
03/11/70 0850	5050 5050		12.1 107	44.0F 4.9C	7.5 7.4	124	-- --	-- --	4.2 .18 15	-- .00	.0 .00	66 1.08 87	-- --	1.8 .05 4	.3 .00	.10 --		55	90	
04/08/70 1505	5050 5050		10.8 111	67.0F 15.5C	8.0 8.2	202	-- --	-- --	5.6 .24 12	-- .00	.0 .00	101 1.66 82	-- --	2.3 .06 3	.0 .00	.20 --		102	3	
05/13/70 0800	5050 5050		11.3 111	56.0F 13.3C	8.1 8.3	228	27 1.15 55	8.4 .69 28	9.2 .40 16	1.1 .03 1	.0 .00	115 1.89 74	18 .37 15	5.4 .15 6	.1 .00	.30 --	127 127	102 8	2	
06/10/70 0800	5050 5050		9.7 104	64.0F 17.8C	8.4 8.3	231	-- --	-- --	8.5 .37 16	-- .00	.0 .00	115 1.90 82	-- --	3.1 .09 4	.1 .00	.30 --		101	2	
07/08/70 0730	5050 5050		7.0 91	74.0F 23.3C	8.4 8.1	237	-- --	-- --	10 .44 19	-- .00	.0 .00	107 1.75 74	-- --	3.9 .11 5	.1 .00	.40 --		98	1	

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	OO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
						CA MG NA K CO3 HCO3 SO4 CL NO3										B F TDS TH TURB									
																S102 SUM NCH									
*****																									
F6 1329.50						EEL RIVER ABOVE OUTLET CREEK ( 5D )										CONTINUED									
08/12/70	5050		6.6	73.0F	7.9	--	--	11	--	.0	105	--	8.6	.1	.60	--					102	1			
0730	5050	4.0	78	22.8C	7.9	248		.48		.00	1.72		.24	.00		--									
								19			69		10												
09/16/70	5050	1.74	9.6	61.0F	8.1	--	--	12	--	.0	118	--	8.6	.1	.60	--					115	1			
0840	5050	2.8	100	16.1C	8.3	274		.52		.00	1.94		.24	.00		--									
								19			71		9												
F6 1350.00						OUTLET CREEK NEAR LONGVALE ( 5B )																			
10/08/69	5050	1.18	10.0	59.0F	8.1	--	--	16	--	.0	145	--	32	--	2.60	--					135	1			
0825	5050	1.9	102	15.0C	8.2	336		.70		.00	2.34		.90			--									
								21			71		27												
11/05/69	5050	2.64	10.3	55.0F	7.9	--	--	16	--	.0	138	--	25	--	2.50	--					126	5			
0745	5050	192	100	12.8C	8.0	323		.70		.00	2.26		.71			--									
								22			70		22												
12/03/69	5050	1.37	12.7	40.0F	8.0	--	--	16	--	.0	151	--	20	--	1.90	--					134	1			
0930	5050	6.1	101	4.4C	8.0	326		.70		.00	2.44		.56			--									
								21			76		17												
01/07/70	5050	2.30	13.1	39.0F	7.3	--	--	6.3	--	.0	72	--	5.9	--	.40	--					57	7			
1130	5050	110	103	3.9C	7.4	151		.27		.00	1.18		.17			--									
								18			78		11												
02/04/70	5050	3.14	12.1	49.0F	7.3	--	--	4.6	--	.0	57	--	3.7	--	.30	--					46	20			
1110	5050	371	109	9.4C	7.3	114		.20		.00	.93		.10			--									
								18			82		9												
03/11/70	5050	3.64	11.6	49.0F	7.3	--	--	4.4	--	.0	53	--	3.2	--	.10	--					43	25			
0825	5050	590	104	9.4C	7.6	105		.19		.00	.87		.09			--									
								18			83		9												
04/08/70	5050	1.88	10.9	60.0F	7.8	--	--	7.2	--	.0	94	--	6.4	--	.40	--					81	2			
1535	5050	53	112	15.5C	8.1	183		.31		.00	1.54		.18			--									
								17			84		10												
05/13/70	5050	0.76	10.9	55.0F	7.9	--	9.7	10	1.2	.0	112	7.7	9.9	.1	.90	--					119	25	2		
0740	5050	38	107	12.8C	8.1	217	1.10	.80	.44	.03	1.34	.16	.23	.00		--					117	3			
							46	34	19	1	81	7	12												
06/10/70	5050	0.43	9.2	64.0F	8.2	--	--	12	--	.0	129	--	11	--	1.10	--					106	3			
0720	5050	10	99	17.8C	8.3	251		.52		.00	2.12		.31			--									
								21			84		12												
07/08/70	5050		7.5	74.0F	8.3	--	--	14	--	.0	138	--	15	--	1.60	--					111	1			
0700	5050	3.5	90	23.3C	8.0	281		.61		.00	2.26		.42			--									
								22			89		15												
09/16/70	5050	1.14	8.7	58.0F	8.0	--	--	17	--	.0	142	--	31	--	2.70	--					129	1			
0825	5050	1.9	87	14.4C	8.0	327		.74		.00	2.34		.87			--									
								23			71		27												
F6 3010.00						EEL RIVER, MIDDLE FORK, AT DOS RIOS ( 5C )																			
10/08/69	5050	7.22	10.6	59.0F	8.1	--	--	8.7	--	.0	113	--	16	.1	.30	--					147	0			
0930	5050	14	108	15.0C	8.2	340		.38		.00	1.85		.45	.00		--									
								11			54		13												
11/05/69	5050	8.63	10.5	55.0F	8.1	--	--	10	--	.0	130	--	13	.2	.10	--					151	105			
0850	5050	257	102	12.8C	8.1	334		.44		.00	2.13		.37	.00		--									
								13			64		11												
12/03/69	5050	7.43	13.3	42.0F	8.3	--	--	7.4	--	.0	134	--	12	.1	.30	--					144	2			
1045	5050	49	109	5.6C	8.3	313		.72		.00	2.20		.34	.00		--									
								10			70		11												
01/07/70	5050	9.37	13.8	38.0F	7.4	--	--	3.5	--	.0	87	--	2.5	--	.10	--					40	17			
1225	5050	615	106	3.3C	7.6	176		.15		.00	1.43		.07			--									
								9			41		4												
02/04/70	5050	11.65	12.9	46.0F	7.8	--	--	3.8	--	.0	81	--	1.7	.2	.10	--					74	230			
1210	5050	2330	111	7.8C	7.8	159		.17		.00	1.43		.05	.00		--									
								11			84		3												
03/11/70	5050	11.72	13.9	45.0F	7.7	--	--	3.8	--	.0	76	--	1.4	.4	.10	--					68	180			
0940	5050	2700	111	7.2C	7.9	147		.17		.00	1.25		.04	.01		--									
								12			45		3	1											
04/08/70	5050	9.65	11.3	55.0F	7.9	--	--	4.1	--	.0	151	--	2.1	.0	.00	--					102	20			
1435	5050	590	110	12.8C	8.2	205		.18		.00	1.66		.05	.00		--									
								9			41		3												
05/13/70	5050	8.76	11.3	54.0F	8.0	--	25	6.0	5.3	.8	.0	95	17	2.5	.1	.00	--				104	87	20		
0900	5050	2700	108	12.2C	8.0	193	1.25	.49	.23	.02	1.56	.35	.07	.00		--					104	9			
							63	25	12	1	74	18	4		</										

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.M. Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER					MILLIGRAMS PER LITER				
						PERCENT REACTANCE VALUE										MILLIEQUIVALENTS PER LITER					PERCENT REACTANCE VALUE				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3		B	F	TOS	TH	TJRH					
.....																									
F6 3u10.00						EEL RIVER,MIDDLE FORK,AT DOS RIOS (5C) CONTINUED																			
09/16/70	5050	8.04	9.9	64.0F	8.0	--	--	17	--	.0	136	--	23	.1	.30	--				160	1				
0925	5050	7.1	106	17.8C	8.1	370		.52		.00	1.74		.56	.00	--										
								14			47		15												
F6 3u50.00						MILL CREEK NEAR COVELO ( 5E )																			
01/07/70	5050	8.42	12.6	39.0F	7.7	--	--	5.8	--	.0	114	--	3.9	--	.00	--				102	4				
1250	5050	28	190	3.9C	7.6	222		.25		.00	1.87		.11		--										
								11			84		5												
02/04/70	5050	9.14	11.7	49.0F	7.5	--	--	5.8	--	.0	104	--	3.6	.9	.10	--				89	25				
1300	5050	218	106	9.4C	7.6	188		.25		.00	1.77		.10	.01	--										
								13			94		5	1											
03/11/70	5050	9.41	11.3	48.0F	7.4	--	--	6.0	--	.0	112	--	3.0	.4	.00	--				86	35				
1030	5050	264	101	8.9C	7.8	187		.26		.00	1.84		.08	.01	--										
								14			98		4	1											
04/08/70	5050	8.29	10.8	61.0F	7.9	--	--	7.2	--	.0	170	--	2.0	.1	.00	--				142	2				
1340	5050	29	114	16.1C	8.2	289		.31		.00	2.79		.06	.00	--										
								11			97		2												
05/13/70	5050	8.12	11.2	59.0F	8.0	--	--	33	19	10	1.1	.0	202	10	4.5	.2	.00	--	160	159	8				
1000	5050	13	115	15.0C	8.2	333	1.65	.44	.03	.00	3.31	.21	.13	.00	--			179	5						
							45	42	12	1	91	6	4												
06/10/70	5050	7.85	8.2	67.0F	7.6	--	--	12	--	.0	221	--	3.1	.1	.00	--				175	4				
0915	5050	4.0	92	19.4C	8.1	362		.52		.00	3.62		.09	.00	--										
								14			100		2												
F6 3120.00						EEL RIVER,MIDDLE FORK,ABOVE BLACK BUTTE RIVER ( 5G )																			
10/08/69	5050		10.8	62.0F	8.3	--	--	17	--	.0	119	--	34	.1	.40	--				142	1				
1035	5050	9.8	116	16.7C	8.3	376		.74		.00	1.95		.96	.00	--										
								20			52		26												
11/05/69	5050		11.4	50.0F	7.5	--	--	3.6	--	.0	54	--	5.6	.3	.00	--				55	50				
1025	5050	770	106	10.0C	7.6	131		.16		.00	.89		.16	.00	--										
								12			64		12												
12/03/69	5050		12.7	47.0F	8.4	--	--	9.2	--	.0	100	--	18	.1	.30	--				105	2				
1215	5050	24	113	8.3C	8.2	258		.40		.00	1.64		.51	.00	--										
								16			64		20												
01/07/70	5050		13.1	39.0F	7.6	--	--	3.0	--	.0	62	--	2.7	--	.00	--				57	4				
1405	5050	200E	105	3.9C	7.6	129		.13		.00	1.02		.08		--										
								10			79		6												
02/04/70	5050		12.7	46.0F	7.5	--	--	2.6	--	.0	52	--	1.8	.1	.00	--				47	65				
1405	5050	830	112	7.8C	7.6	104		.11		.00	.85		.05	.00	--										
								11			82		5												
03/11/70	5050		12.8	44.0F	7.3	--	--	2.3	--	.0	49	--	1.4	.1	.00	--				43	80				
1135	5050	940	110	6.7C	7.8	94		.10		.00	.80		.04	.00	--										
								11			85		4												
04/08/70	5050		11.9	51.0F	7.5	--	--	3.1	--	.0	61	--	1.0	.0	.00	--				60	3				
1235	5050		112	10.5C	8.0	128		.13		.00	1.00		.03	.00	--										
								10			78		2												
05/13/70	5050		11.8	53.0F	7.6	--	--	16	2.4	3.0	.3	.0	56	6.4	3.0	.1	.00	--	66	50	5				
1100	5050	130E	114	11.7C	7.8	116	.80	.20	.13	.01	.00	.92	.13	.08	.00	--		59	4						
							70	18	11	1		81	12	7											
06/10/70	5050		9.6	64.0F	7.9	--	--	5.7	--	.0	79	--	5.5	.0	.10	--				74	2				
1005	5050	60E	105	17.8C	8.3	173		.25		.00	1.30		.16	.00	--										
								14			75		9												
07/08/70	5050		8.6	72.0F	8.4	--	--	11	--	1.0	103	--	15	.1	.10	--				110	0				
0925	5050	26E	105	22.2C	8.4	267		.48		.03	1.69		.42	.00	--										
								18		1	63		16												
08/12/70	5050		9.0	72.0F	8.4	--	--	15	--	.0	118	--	32	.0	.40	--				139	1				
0900	5050	8E	105	22.2C	7.8	356		.65		.00	1.94		.90	.00	--										
								18			54		25												
09/16/70	5050		9.9	64.4F	8.2	--	--	49	9.2	20	1.4	.0	119	48	42	.0	.40	--	246	160	2				
1010	5050	4.5	105	18.0C	8.3	409	2.45	.76	.87	.04	.00	1.95	1.00	1.18	.00	--		230	63						
							59	18	21	1	47	24	29												
F6 3200.00						BLACK BUTTE RIVER NEAR COVELO ( 5H )																			
10/08/69	5050	11.78	10.1	62.0F	8.2	--	--	5.0	--	.0	127	--	2.3	.0	.10	--				155	1				
1050	5050	5E	108	16.7C	8.3	329		.22		.00	2.08		.06	.00	--										
								7			63		2												
11/05/69	5050	13.87	10.7	53.0F	7.9	--	--	6.7	--	.0	118	--	4.1	.5	.00	--				150	140				
1050	5050	159	103	11.7C	7.9	324		.29		.00	1.94		.12	.01	--										
								9			60		4												
12/03/69	5050	12.83	12.2	46.0F	8.2	--	--	5.0	--	.0	129	--	3.9	.1	.20	--				155	1				
1240	5050	9.2	108	7.8C	8.2	318		.22		.00	2.12		.11	.00	--										

TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD		MINERAL	CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER								
					LABORATORY PH	EC		CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	TURB				
																						PERCENT REACTANCE VALUE			
*****																									
F6 3200.00																									
BLACK BUTTE RIVER NEAR COVELO ( 5H ) CONTINUED																									
03/11/70	5050	16.55	12.4	45.0F	7.7		--	--	3.4	--	.0	71	--	.5	.1	.10	--		67	210					
1155	5050	480	108	7.2C	7.9	145			.15		.00	1.16		.01	.00	--									
									10			80		1											
04/08/70	5050	15.92	11.2	53.0F	7.8		--	--	4.1	--	.0	92	--	.0	.1	.00	--		96	15					
1210	5050	140E	108	11.7C	8.1	201			.18		.00	1.51		.00	.00	--									
									9			75													
05/13/70	5050	15.68	11.1	55.0F	7.9		--	--	4.5	.8	.0	91	23	1.0	.1	.00	--	120	92	25					
1045	5050	120	110	12.8C	8.1	205	1.50	.34	.20	.02	.00	1.49	.48	.03	.00	--	109		18						
							73	17	10	1		75	24	2											
06/10/70	5050	15.20	9.4	66.0F	8.0		--	--	5.5	--	.0	119	--	1.0	.1	.10	--		117	1					
1025	5050	38	106	18.9C	8.3	267			.24		.00	1.95		.03	.00	--									
									9			73		1											
07/08/70	5050	14.78	9.7	75.0F	8.2		--	--	7.5	--	3.0	126	--	1.0	.1	.00	--		153	0					
0940	5050	12	119	23.9C	8.5	322			.33		.10	2.07		.03	.00	--									
									10		3	64		1											
08/12/70	5050	15.08	9.3	73.0F	8.2		--	--	7.0	--	.0	129	--	3.2	.0	.20	--		172	1					
0915	5050	4.5	112	22.8C	7.9	362			.30		.00	2.12		.09	.00	--									
									8			59		2											
09/16/70	5050	14.58	10.1	66.0F	8.2		--	--	7.4	--	.0	126	--	10	.1	.10	--		192	0					
1030	5050	2E	113	18.9C	8.1	388			.32		.00	2.07		.28	.00	--									
									8			53		7											
F6 4100.00						EEL RIVER, SOUTH FORK, NEAR MIRANDA ( 7 )																			
10/07/69	5050	1.62	12.4	61.0F	8.3		--	--	8.5	--	.0	152	--	7.4	.1	.10	--		128	1					
1510	5050	39E	126	16.1C	8.2	288			.37		.00	2.49		.21	.00	--									
									13			86		7											
11/04/69	5050	3.58	10.9	58.0F	8.0		--	--	8.5	--	.0	140	--	8.1	.0	.10	--		124	2					
1510	5050	111	107	14.4C	8.2	276			.37		.00	2.30		.23	.00	--									
									13			83		8											
12/02/69	5050	3.61	12.6	47.0F	7.8		--	--	7.5	--	.0	131	--	7.8	.1	.20	--		118	2					
1615	5050	95E	108	8.3C	8.2	255			.33		.00	2.15		.22	.00	--									
									13			84		9											
01/07/70	5050	5.51	12.5	43.0F	7.3		--	--	5.5	--	.0	82	--	3.2	--	.10	--		72	32					
0930	5050	908	101	6.1C	7.3	166			.24		.00	1.34		.09		--									
									14			81		5											
02/04/70	5050	7.30	12.0	49.0F	7.4		--	--	5.2	--	.0	65	--	3.3	.3	.00	--		54	150					
0920	5050	2240	106	9.4C	7.5	126			.23		.00	1.07		.09	.00	--									
									18			85		7											
03/10/70	5050	7.51	11.8	51.0F	7.4		--	--	5.1	--	.0	61	--	3.4	.3	.00	--		50	180					
1600	5050	3550	107	10.5C	7.8	118			.22		.00	1.00		.10	.00	--									
									19			85		8											
04/08/70	5050	4.94	11.7	51.0F	7.7		--	--	5.8	--	.0	90	--	3.0	.0	.00	--		80	3					
0925	5050	492	106	10.5C	8.0	174			.25		.00	1.48		.08	.00	--									
									14			85		5											
05/12/70	5050	4.53	12.1	59.0F	8.2		--	--	7.5	1.0	.0	102	11	5.7	.1	.10	--	115	86	3					
1600	5050	322	119	15.0C	8.3	198	1.10	.62	.44	.03	.00	1.67	.23	.16	.00	--	108		3						
							50	28	20	1		81	11	8											
06/09/70	5050	3.85	11.2	66.0F	8.2		--	--	8.5	--	.0	125	--	4.0	.1	.10	--		105	2					
1245	5050	140	121	18.9C	8.3	230			.37		.00	2.05		.11	.00	--									
									16			89		5											
07/07/70	5050	3.54	11.4	75.0F	8.4		--	--	9.8	--	.0	132	--	5.4	.1	.10	--		109	1					
1200	5050	87	135	23.9C	8.1	255			.43		.00	2.16		.15	.00	--									
									17			85		6											
08/11/70	5050	3.21	12.3	79.0F	8.4		--	--	8.9	--	.0	111	--	7.9	.4	.20	--		95	1					
1230	5050	45	152	26.1C	8.1	226			.39		.00	1.82		.22	.01	--									
									17			81		10											
09/15/70	5050	3.09	11.0	65.0F	8.4		--	--	11	--	.0	144	--	9.8	.1	.20	--		126	1					
1610	5050	29	124	18.3C	8.3	275			.48		.00	2.36		.28	.00	--									
									17			86		10											
F6 5300.00						VAN DUZEN RIVER NEAR BRIDGEVILLE ( 5A )																			
10/07/69	5050	4.47	11.0	61.0F	8.3		--	--	8.0	--	.0	150	--	5.9	--	.10	--		144	1					
1245	5050	12	117	16.1C	8.3	305			.35		.00	2.46		.17		--									
									11			81		6											
11/04/69	5050	4.62	11.2	58.0F	8.1		--	--	6.6	--	.0	130	--	4.4	--	.10	--		125	1					
1240	5050	33	110	14.4C	8.1	269			.29		.00	2.13		.12		--									
									11			79		4											
12/02/69	5050	4.62	12.7	44.0F	7.8		--	--	5.2	--	.0	123	--	4.5	--	.20	--		118	1					
1330	5050	31	110	8.9C	8.0	252			.23		.00	2.02		.13		--									
									9			90		5											
01/06/70	5050	5.43	13.3	40.0F	7.4		--	--	3.1	--	.0	76	--	1.4	--	.00	--		69	30					
1500	5050	33	103	4.4C	7.4	152			.13		.00	1.25		.04		--									
									9			82		3											
02/03/70	5050	6.50	12.5	40.0F	7.4		--	--	3.0	--	.0	62	--	1.0	--	.20	--		54	200					
1445	5050	1180	100	8.9C	7.5	120			.13		.00	1.02		.03		--									
									11			85		2											



TABLE D-2 (CONTINUED)  
MINERAL ANALYSIS OF SURFACE WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER										MILLIEQUIVALENTS PER LITER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
						PERCENT REACTANCE VALUE										MILLIGRAMS PER LITER										MILLIEQUIVALENTS PER LITER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	TURB	CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	TURB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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F6 5300.00						VAN DUZEN RIVER NEAR BRIDGEVILLE ( 5A ) CONTINUED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
03/10/70 1335	5050 5050	6.85 1400	12.5 107	47.0F 8.3C	7.4 7.8	117	--	--	3.4 .15 13	--	.0 .00	62 1.02 87	--	1.7 .05 4	--	.00 --	--			53	160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

TRACE ELEMENT ANALYSES OF SURFACE WATER  
North Coastal Area

STATION	STATION NUMBER	DATE	CONSTITUENTS IN MICROGRAMS PER LITER																
			(Al)	(Be)	(Bi)	(Cd)	(Co)	(Cr)	(Cu)	(Fe)	(Ga)	(Ge)	(Mn)	(Mo)	(Ni)	(Pb)	(Ti)	(V)	(Zn)
Eel River above Outlet Creek (5d)	F61329.50	5-13-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	17	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.5	<5.7
Eel River, Middle Fork, at Dos Rios (5c)	F63010.00	5-13-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	15	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.6	<5.7
Eel River at Scotia (6)	F61100.00	5-12-70	<1.4	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	6.3	<5.3	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.6	<5.7
Klamath River below Iron Gate Dam (1f)	F31600.00	5-12-70 8- 3-70	<1.4 6.9	<0.6 <0.6	<0.3 <0.3	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	29 5.1	<5.7 <5.7	<0.3 <0.3	<1.4 <1.4	<0.3 2.1	<0.3 1.0	<1.4 <1.4	<0.6 <0.6	7.7 1.9	<5.7 <5.7
Klamath River near Klamath (3)	F31100.00	5-11-70 9-14-70	<1.4 <1.4	<0.6 <0.6	<0.3 <0.3	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	54 8.6	<5.7 <5.7	<0.3 <0.3	<1.4 <1.4	<0.3 <0.3	<0.3 0.7	<1.4 <1.4	<0.6 <0.6	1.0 1.1	<5.7 <5.7
Klamath River at Orleans (2c)	F31220.01	5-11-70 9-14-70	<1.4 <1.4	<0.6 <0.6	<0.3 <0.3	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	7.4 2.3	<5.7 <5.7	<0.3 <0.3	<1.4 <1.4	<0.3 <0.3	5.1 0.8	<1.4 <1.4	<0.6 <0.6	1.4 0.3	<5.7 <5.7
Klamath River near Seiad Valley (2b)	F31430.00	5-12-70 8-31-70	<1.4 14	<0.6 <0.6	<0.3 <0.3	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	51 46	<5.7 <5.7	<0.3 <0.3	<1.4 <1.4	<0.3 <0.3	<0.3 2.1	<1.4 <1.4	<0.6 <0.6	2.9 1.1	<5.7 12
Mad River near Arcata (6a)	F51100.00	5-12-70	60	<0.6	<0.3	<1.4	<1.4	<1.4	<1.4	83	<5.7	<0.3	<1.4	<0.3	<0.3	<1.4	<0.6	0.7	<5.7
Trinity River near Hoopa (4)	F41090.00	5-11-70 9-14-70	<1.4 2.3	<0.6 <0.6	<0.3 <0.3	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	<1.4 <1.4	114 4.0	<5.7 <5.7	<0.3 <0.3	<1.4 <1.4	<0.3 <0.3	<0.3 1.4	<1.4 <1.4	<0.6 <0.6	0.7 0.6	<5.7 <5.7

< Results are less than the amount indicated.

Al - Aluminum  
Be - Beryllium  
Bi - Bismuth  
Cr - Chromium  
Cu - Copper  
Fe - Iron  
Ge - Germanium  
Mn - Manganese  
Mo - Molybdenum  
Ni - Nickel  
Pb - Lead  
Ti - Titanium  
V - Vanadium  
Zn - Zinc

TABLE D-4  
MISCELLANEOUS CONSTITUENTS IN SURFACE WATER  
NORTH COASTAL AREA

Station Number	Station	Date Time	Constituents * in mg/l			Samp	Lab
F31100.00	KLAMATH RIVER NEAR KLAMATH (3)		<u>Fe</u>	<u>Li</u>	<u>Sr</u>		
		10-07-69	0.03	< 0.01	0.15	5050	5000
		11-04-69	0.05	< 0.01	0.13	5050	5000
		12-01-69	0.01	< 0.02	0.12	5050	5000
		1-05-70	0.04	< 0.02	0.09	5050	5000
		2-03-70	0.02	< 0.01	0.09	5050	5000
		3-10-70	0.05	< 0.01	0.09	5050	5000
		4-07-70	0.08	< 0.01	0.08	5050	5000
		5-11-70	0.02	< 0.01	0.06	5050	5000
		6-08-70	0.01	< 0.01	0.09	5050	5000
		7-06-70	0.00	< 0.01	0.06	5050	5000
		8-10-70	0.00	< 0.01	0.16	5050	5000
		9-14-70	0.00	< 0.01	0.14	5050	5000
F61100.00	EEL RIVER AT SCOTIA (6)	10-07-69	0.01	< 0.01	0.63	5050	5000
		11-04-69	0.02	< 0.01	0.45	5050	5000
		12-02-69	0.00	< 0.02	0.45	5050	5000
		1-06-70	0.03	< 0.02	0.25	5050	5000
		2-03-70	0.01	< 0.01	0.23	5050	5000
		3-10-70	0.05	< 0.01	0.20	5050	5000
		4-07-70	0.04	< 0.01	0.32	5050	5000
		5-12-70	0.01	< 0.01	0.21	5050	5000
		6-09-70	0.01	< 0.01	0.43	5050	5000
		7-07-70	0.00	< 0.01	0.35	5050	5000
		8-11-70	0.00	< 0.01	0.53	5050	5000
		9-15-70	0.00	< 0.01	0.46	5050	5000

\* Fe - Iron Li - Lithium Sr - Strontium

< The results are less than the amount indicated

TABLE D-5

NUTRIENTS IN SURFACE WATER

Abbreviations and Chemical Codes

NITROGEN SERIES

NO<sub>3</sub> - Nitrate  
NO<sub>2</sub> - Nitrite  
ORG - Organic Nitrogen  
NH<sub>4</sub> - Ammonium  
TOTAL - Total Nitrogen  
N - Nitrogen

PHOSPHATE SERIES

ORTHO - Ortho Phosphate (Not filtered)  
HYDRO - Hydrolizable Phosphates (Not filtered)  
TOTAL - Total and Organic Phosphates (Not filtered)

MISCELLANEOUS NUTRIENTS

CODE - KN Kjeldahl Nitrogen  
RP Reactive Phosphate (Not filtered)  
UR - M Milligrams per liter  
MY Less than value indicated in milligrams  
per liter

SAMP - Codes for agency collecting sample

5050 - Department of Water Resources

LAB - Codes for laboratory performing analysis

5050 - Department of Water Resources laboratory  
at Bryte

TABLE D-5

# NUTRIENTS IN SURFACE WATER

## NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Samp	Lab
	Nitrogen Series as N					Phosphate Series as P			Code	Value	UR		
	NO <sub>3</sub>	NO <sub>2</sub>	Org	NH <sub>4</sub>	Total	Ortho	Hydro	Total					
	F31470.00 KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE (1c)												
11-17-69						0.13						5050	5050
1-12-70						0.10						5050	5050
3-09-70						0.02						5050	5050
5-12-70	0.35					0.04						5050	5050
7-13-70						0.10						5050	5050
8-03-70						0.10						5050	5050
8-31-70						0.15						5050	5050
	F31600.00 KLAMATH RIVER BELOW IRON GATE DAM (1f)												
10-15-69						0.21						5050	5050
11-17-69						0.12						5050	5050
12-08-69						0.12						5050	5050
1-12-70						0.09						5050	5050
2-09-70						0.08						5050	5050
3-09-70						0.02						5050	5050
4-14-70						0.07						5050	5050
5-12-70	0.44					0.04						5050	5050
6-16-70	0.07					0.12						5050	5050
7-13-70						0.12						5050	5050
8-03-70						0.12						5050	5050
8-31-70						0.15						5050	5050
	F31430.00 KLAMATH RIVER NEAR SEIAD VALLEY (2b)												
10-14-69						0.19						5050	5050
11-17-69						0.11						5050	5050
12-08-69						0.12						5050	5050
1-12-70						0.09						5050	5050
2-09-70						0.07						5050	5050
3-09-70						0.03						5050	5050
4-14-70						0.03						5050	5050
5-12-70	0.32					0.01						5050	5050
6-16-70	0.04					0.06						5050	5050
7-13-70						0.06						5050	5050
8-03-70	0.25					0.06						5050	5050
8-31-70						0.12						5050	5050
	F31100.00 KLAMATH RIVER NEAR KLAMATH (3)												
10-07-69						0.49 *						5050	5000
11-04-69						0.40 *						5050	5000
12-01-69						0.24 *						5050	5000
1-05-70						0.28 *						5050	5000
2-03-70						0.04 *						5050	5000
3-10-70						0.62 *						5050	5000
4-07-70						0.41 *						5050	5000
5-11-70						0.04 *						5050	5000
6-08-70						0.14 *						5050	5000
7-06-70						0.09 *						5050	5000
8-10-70						0.28 *						5050	5000
9-14-70						0.26 *						5050	5000

\* Reported as (PO<sub>4</sub>) Ortho Phosphate

TABLE D-5 (CONT)

# NUTRIENTS IN SURFACE WATER

## NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Samp	Lab
	Nitrogen Series as N					Phosphate Series as P			Code	Value	UR		
	NO <sub>3</sub>	NO <sub>2</sub>	Org	NH <sub>4</sub>	Total	Ortho	Hydro	Total					
	F41090.00 TRINITY RIVER AT HOOPA (4)												
10-06-69						0.01						5050	5050
11-03-69						0.01						5050	5050
12-01-69						0.00						5050	5050
1-05-70						0.00						5050	5050
2-02-70						0.01						5050	5050
3-09-70						0.00						5050	5050
4-06-70						0.02						5050	5050
5-11-70						0.00						5050	5050
6-08-70						0.00						5050	5050
7-06-70						0.01						5050	5050
8-10-70						0.01						5050	5050
9-14-70						0.00						5050	5050
	F41640.00 TRINITY RIVER AT LEWISTON (4a)												
11-03-69						0.00						5050	5050
1-05-70						0.00						5050	5050
3-09-70						0.00						5050	5050
5-11-70						0.00						5050	5050
7-06-70						0.00						5050	5050
9-14-70						0.00						5050	5050
	F41376.00 TRINITY RIVER NEAR BURNT RANCH (4b)												
11-03-69						0.00						5050	5050
1-05-70						0.00						5050	5050
3-09-70						0.00						5050	5050
5-11-70						0.00						5050	5050
7-06-70						0.00						5050	5050
9-14-70						0.00						5050	5050
	F63010.00 EEL RIVER, MIDDLE FORK,AT DOS RIOS (5c)												
10-08-69						0.00						5050	5050
11-05-69						0.00						5050	5050
12-03-69						0.01						5050	5050
2-04-70						0.01						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.02						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.01						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050
	F61329.50 EEL RIVER ABOVE OUTLET CREEK (5d)												
10-08-69						0.00						5050	5050
11-05-69						0.00						5050	5050
12-03-69						0.00						5050	5050
2-04-70						0.01						5050	5050
3-11-70						0.00						5050	5050
4-08-70						0.02						5050	5050
5-13-70						0.00						5050	5050
6-10-70						0.00						5050	5050
7-08-70						0.00						5050	5050
8-12-70						0.00						5050	5050
9-16-70						0.00						5050	5050

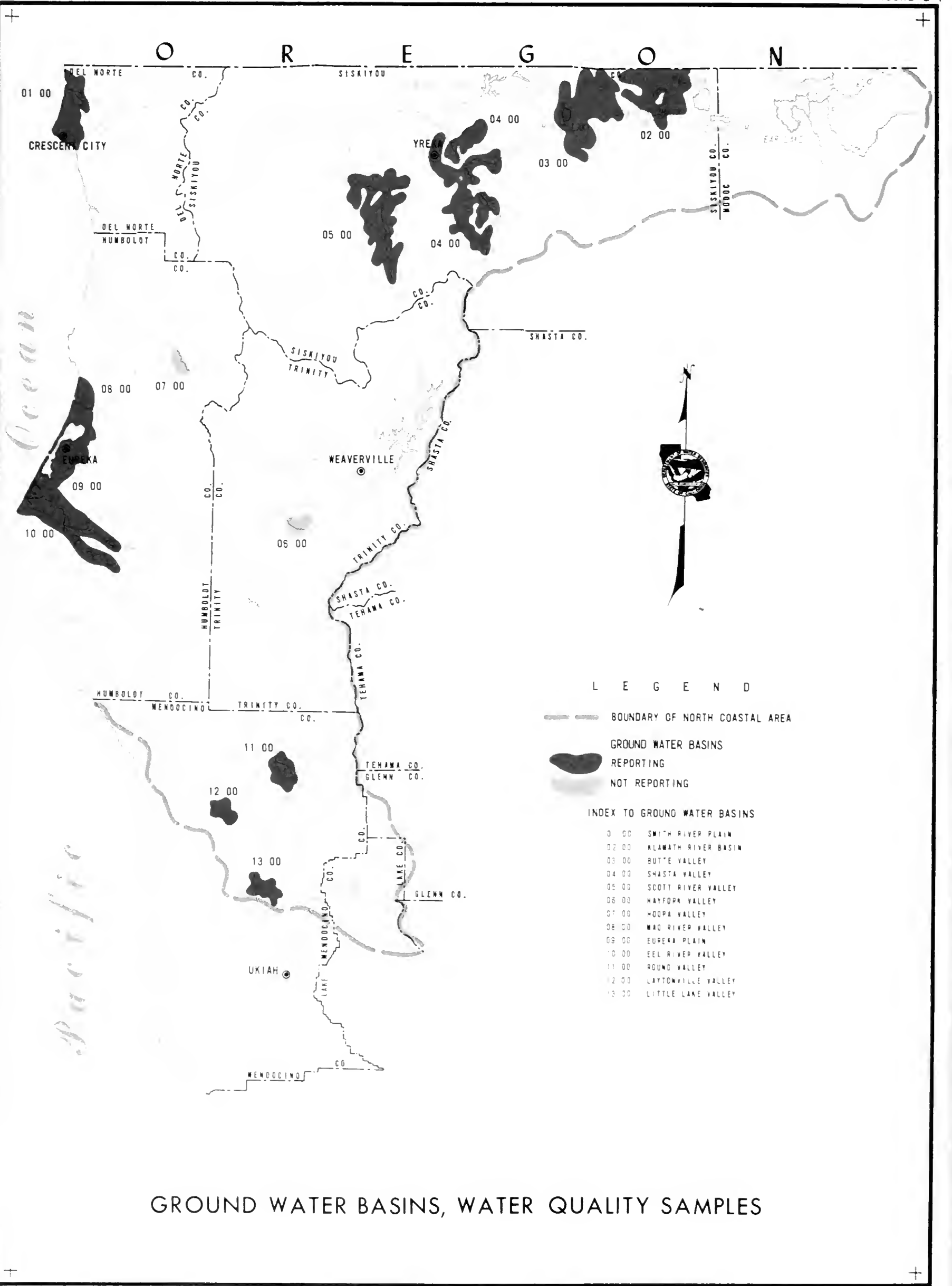
TABLE D-5 (CONT)

# NUTRIENTS IN SURFACE WATER

## NORTH COASTAL AREA

Date Time	Nutrients (Mg/L)								Miscellaneous Nutrients			Samp	Lab	
	Nitrogen Series as N					Phosphate Series as P								
	NO <sub>3</sub>	NO <sub>2</sub>	Org	NH <sub>4</sub>	Total	Ortho	Hydro	Total	Code	Value	UR			
	F63050.00 MILL CREEK NEAR COVELO (5e)													
2-04-70						0.02							5050	5050
3-11-70						0.02							5050	5050
4-08-70						0.03							5050	5050
5-13-70						0.00							5050	5050
6-10-70						0.03							5050	5050
	F63120.00 EEL RIVER, MIDDLE FORK, ABOVE BLACK BUTTE RIVER (5g)													
10-08-69						0.01							5050	5050
11-05-69						0.01							5050	5050
12-03-69						0.00							5050	5050
2-04-70						0.00							5050	5050
3-11-70						0.00							5050	5050
4-08-70						0.01							5050	5050
5-13-70						0.00							5050	5050
6-10-70						0.00							5050	5050
7-08-70						0.00							5050	5050
8-12-70						0.00							5050	5050
9-16-70						0.00							5050	5050
	F63200.00 BLACK BUTTE RIVER NEAR COVELO (5h)													
10-08-69						0.01							5050	5050
11-05-69						0.02							5050	5050
12-03-69						0.00							5050	5050
2-04-70						0.01							5050	5050
3-11-70						0.00							5050	5050
4-08-70						0.01							5050	5050
5-13-70						0.00							5050	5050
6-10-70						0.00							5050	5050
7-08-70						0.00							5050	5050
8-12-70						0.00							5050	5050
9-16-70						0.00							5050	5050
	F61100.00 EEL RIVER AT SCOTIA (6)													
10-07-69						0.10 *							5050	5000
11-04-69						0.04 *							5050	5000
12-02-69						0.03 *							5050	5000
1-06-70						0.26 *							5050	5000
2-03-70						0.23 *							5050	5000
3-10-70						0.80 *							5050	5000
4-07-70						0.30 *							5050	5000
5-12-70						0.00 *							5050	5000
6-09-70						0.03 *							5050	5000
7-07-70						0.00 *							5050	5000
8-11-70						0.12 *							5050	5000
9-15-70						0.09 *							5050	5000
	F64100.00 EEL RIVER, SOUTH FORK, NEAR MIRANDA (7)													
10-07-69						0.00							5050	5050
11-04-69						0.01							5050	5050
12-02-69						0.02							5050	5050
2-04-70						0.02							5050	5050
3-10-70						0.01							5050	5050
4-08-70						0.04							5050	5050
5-12-70						0.00							5050	5050
6-09-70						0.01							5050	5050
7-07-70						0.00							5050	5050
8-11-70						0.00							5050	5050
9-15-70						0.00							5050	5050

\* Reported as (PO<sub>4</sub>) Ortho Phosphate



GROUND WATER BASINS, WATER QUALITY SAMPLES



## APPENDIX E

### GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1969, through September 30, 1970. The data were collected from a number of major ground water sources in the North Coastal area in cooperation with local agencies. During the 1970 water year, 74 wells were sampled in 11 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are normally made. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources.

Laboratory analyses of ground waters were performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 12th Edition.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

# TABLE E-1 MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050 - California Department of Water Resources

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit at the time of field sampling. Water temperature in degrees Celsius is computed from degrees Fahrenheit.
<u>PH LAB &amp; FIELD</u>	- Measure of acidity or alkalinity of water.
<u>EC LAB</u>	- The electrical conductance in micromhos at temperature when sampled.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius.
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents.
<u>TH</u>	- Total hardness.
<u>NCH</u>	- Noncarbonate hardness.
<u>SAR</u>	- Sodium adsorption ratio.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F <sup>3</sup>	- Fluoride	SIO <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	SO <sub>4</sub>	- Sulfate

TABLE E-1  
MINERAL ANALYSIS OF GROUND WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLE# LAB		TEMP	FIELD LABORATORY PH	EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER										MILLIGRAMS PER LITER				
						PERCENT REACTANCE VALUE										H	F	TDS SUM	TH NCH	SAR
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3						
SMITH RIVER PLAIN																				
06/24/70 1500	5050 5050	1-01.00 16N/01W-02Q01	M	42.0F	6.5	155	9.8	7.9	9.4	.6	.0	76	.0	6.9	1.4	.00	--	95	57	2
				16.7C	7.0	150	.49	.65	.41	.02	1.25	.19	.02	--	74	6				
06/24/70 1400	5050 5050	16N/01W-20H01	M	54.0F	6.1	158	--	--	--	--	.0	36	--	16	11	--	--	43		
				14.4C	7.4	155	--	--	--	.00	.59	.45	.18	--	265	106				
06/24/70 1430	5050 5050	16N/02W-13E01	M	54.0F	5.9	280	11	9.4	30	1.4	.0	69	10	42	1.8	.00	--	157	66	5
				14.4C	6.6	266	.55	.77	1.31	.04	1.13	.21	1.18	.03	--	140	10			
06/25/70 1015	5050	17N/01W-03E01	M	54.0F	6.8	340	--	--	--	--	--	--	--	--	--	--	--			
				14.4C			--	--	--	--	--	--	--	--	--	--				
06/24/70 0940	5050	17N/01W-14C02	M	60.0F	6.3	190	--	--	--	--	--	--	--	--	--	--	--			
				15.5C			--	--	--	--	--	--	--	--	--	--				
06/24/70 1745	5050	18N/01W-05K01	M	59.0F	5.9	170	--	--	--	--	--	--	--	--	--	--	--			
				15.0C			--	--	--	--	--	--	--	--	--	--				
06/24/70 1635	5050	18N/01W-17R04	M	62.0F	7.0	278	--	--	--	--	--	--	--	--	--	--	--			
				16.7C			--	--	--	--	--	--	--	--	--	--				
06/25/70 0910	5050 5050	18N/01W-26H01	M	54.0F	6.1	83	--	--	--	--	.0	40	--	4.1	--	--	--	34		
				14.4C	7.4	85	--	--	--	.00	.66	.12	--	129	--	--				
06/25/70 1000	5050	18N/01W-34H02	M	57.0F	6.6	340	--	--	--	--	--	--	--	--	--	--	--			
				13.9C			--	--	--	--	--	--	--	--	--	--				
BUTTE VALLEY																				
07/06/70 1820	5050	1-03.00 45N/01E-09C02	M	54.0F	7.7	182	--	--	--	--	--	--	--	--	--	--	--			
				14.4C			--	--	--	--	--	--	--	--	--	--				
07/06/70 0805	5050 5050	45N/02W-01P01	M	50.0F	6.3	225	--	--	--	--	.0	94	--	1.6	--	--	--	92		
				10.0C	7.2	214	--	--	--	.00	1.61	.05	--	21	--	--				
07/06/70 0950	5050 5050	46N/01W-06P01	M	53.0F	7.3	625	--	--	37	--	.0	323	--	8.4	--	--	--	243		
				11.7C	7.8	600	--	--	1.61	.00	5.30	.24	--	36	--	--				
07/06/70 0935	5050 5050	46N/01W-17B01	M	55.0F	8.2	360	21	16	33	4.8	.0	222	3.4	3.5	1.9	.00	--	198	119	4
				12.8C	8.3	348	1.05	1.32	1.44	.12	3.64	.07	.10	.03	--	195	64			
07/06/70 0925	5050 5050	46N/01W-17L01	M	55.0F	7.5	460	32	26	22	5.2	.0	260	15	4.5	.9	.00	--	258	189	2
				12.8C	7.8	444	1.60	2.14	.96	.13	4.26	.31	.13	.01	--	236	26			
07/06/70 0900	5050	46N/02W-16A02	M	52.0F	8.0	185	--	--	--	--	--	--	--	--	--	--	--			
				11.1C			--	--	--	--	--	--	--	--	--	--				
07/06/70 1030	5050	47N/01E-32A01	M	71.0F	8.2	195	--	--	--	--	--	--	--	--	--	--	--			
				21.6C			--	--	--	--	--	--	--	--	--	--				
07/06/70 1110	5050 5050	47N/01W-23H02	M	66.0F	7.7	250	6.2	6.4	32	7.6	.0	119	.0	8.4	11	.10	--	164	42	6
				18.9C	8.0	237	.31	.53	1.39	.19	1.95	.00	.24	.18	--	131	56			
07/06/70 1145	5050 5050	47N/02W-21H03	M	54.0F	7.1	110	8.2	5.7	5.1	1.6	.0	61	.0	1.6	1.4	.00	--	100	44	1
				13.3C	7.5	105	.41	.47	.22	.04	1.00	.00	.05	.02	--	54	6			
07/06/70 1400	5050	48N/01E-30F01	M	57.0F	7.7	360	--	--	--	--	--	--	--	--	--	--	--			
				13.9C			--	--	--	--	--	--	--	--	--	--				
07/06/70 1500	5050 5050	48N/01E-31D03	M	73.0F	8.4	460	3.4	2.6	99	11	.0	273	.0	9.1	9.6	.50	--	294	19	29
				22.8C	8.3	452	.17	.21	4.31	.28	4.48	.26	.15	--	272	205				
07/06/70 1300	5050 5050	48N/01W-28J01	M	53.0F	7.7	405	--	--	--	--	.0	237	--	5.5	--	--	--	155		
				17.2C	8.3	397	--	--	--	.00	3.89	.16	--	37	--	--				
07/06/70 1430	5050 5050	48N/01W-36J01	M	61.0F	7.4	1400	26	73	165	30	.0	790	52	30	11	.20	--	773	367	12
				16.1C	7.7	1220	1.30	6.00	7.18	.77	12.46	.85	.18	--	782	283				

TABLE E-1 (CONTINUED)  
**MINERAL ANALYSIS OF GROUND WATER**  
 NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER				
				PERCENT REACTANCE VALUE																			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS	TH	SAR						
														SI02	SUM	NCH	SAR						
*****																							
SHASTA VALLEY																							
07/07/70 0755	1-04-20 42N/05W-20J01 5050 5050	M	57.0F	6.8	360	18	25	22	4.1	.0	228	.3	6.0	.2	.10	--	226	149	2				
			13.9C	7.0	363	.90	2.06	.96	.10	.00	3.74	.01	.17	.00	--	190	39						
						22	51	24	2		95		4										
07/07/70 0830	42N/05W-10J01 5050 5050	M	57.0F	7.3	460	9.6	58	3.2	.3	.0	314	1.6	3.0	3.8	.00	--	251	265	0				
			13.9C	7.6	457	.48	4.77	.14	.01	.00	5.15	.03	.08	.06	--	237	5						
						9	88	3			97	1	2	1									
07/07/70 1040	43N/05W-02C01 5050 5050	M	53.0F	6.5	242	14	12	16	2.5	.0	124	2.8	8.6	1.1	.10	--	161	83	2				
			11.7C	7.0	272	.70	.99	.70	.06	.00	2.03	.06	.24	.02	--	119	17						
						29	40	29	2		86	3	10	1									
07/07/70 0900	43N/05W-21R01 5050	M	62.0F	7.5	470	--	--	--	--	--	--	--	--	--	--	--							
			17.2C																				
07/07/70 0950	44N/05W-32C02 5050 5050	M	62.0F	7.3	1010	45	66	88	4.8	.0	547	18	70	2.2	.90	--	594	382	6				
			16.7C	7.5	1010	2.25	5.43	3.83	.12	.00	8.97	.37	1.97	.04	--	568	65						
						19	47	33	1		79	3	17										
07/07/70 0950	44N/05W-32C03 5050 5050	M	62.0F	7.3	1000	--	--	80	--	.0	542	--	62	--	--	--		378					
			16.7C	7.9	988			3.48		.00	8.89		1.75		--								
07/07/70 1015	44N/05W-34R01 5050 5050	M	58.0F	7.0	730	50	40	47	7.2	3.0	390	14	26	17	.40	--	445	288	4				
			14.4C	8.4	705	2.50	3.29	2.04	.18	.10	6.40	.29	.73	.27	--	400	36						
						31	41	25	2	1	82	4	9	3									
07/07/70 0920	44N/05W-22K01 5050	M	69.0F	7.1	475	--	--	--	--	--	--	--	--	--	--	--							
			20.5C																				
07/07/70 1120	45N/05W-06E01 5050 5050	M	64.0F	8.2	960	5.4	4.5	242	1.6	27	574	.0	29	1.5	8.20	2.2	608	32	54				
			17.8C	8.9	974	.27	.37	10.53	.04	.90	9.41	.00	.82	.02	--	606	484						
						2	3	94		8	84		7										
07/07/70 1045	45N/05W-19E01 5050 5050	M	65.0F	7.5	340	23	12	33	.9	.0	174	36	2.4	.5	.10	--	176	107	4				
			18.3C	8.3	346	1.15	.99	1.44	.02	.00	2.85	.75	.07	.01	--	195	36						
						32	28	40	1		77	20	2										
SCOTT RIVER VALLEY																							
07/07/70 1445	1-05-20 42N/09W-27K01 5050	M	59.0F	6.1	58	--	--	--	--	--	--	--	--	--	--	--							
			15.0C																				
07/07/70 1330	43N/09W-02C01 5050 5050	M	58.0F	7.1	487	56	27	4.9	1.9	.0	287	12	2.7	7.1	.00	--	226	251	0				
			14.4C	7.4	481	2.79	2.22	.21	.05	.00	4.71	.25	.08	.11	--	255	15						
						53	42	4	1		91	5	2	2									
07/07/70 1600	43N/09W-08E01 5050	M	67.0F	6.3	108	--	--	--	--	--	--	--	--	--	--	--							
			19.4C																				
07/07/70 1400	43N/09W-24E02 5050 5050	M	57.0F	7.0	382	38	26	4.2	1.2	.0	240	1.8	1.8	6.4	.00	--	206	203	0				
			13.9C	7.2	379	1.90	2.14	.18	.03	.00	3.94	.04	.05	.10	--	199	5						
						45	50	4	1		95	1	1	2									
07/07/70 1510	43N/09W-29C02 5050	M	65.0F	6.1	59	--	--	--	--	--	--	--	--	--	--	--							
			18.9C																				
07/07/70 1530	43N/09W-11E01 5050	M	62.0F	6.5	83	--	--	--	--	--	--	--	--	--	--	--							
			16.7C																				
07/07/70 1340	44N/09W-34E01 5050 5050	M	71.0F	6.8	312	39	14	5.6	1.0	.0	170	7.4	2.1	16	.00	--	179	156	1				
			21.6C	7.0	420	1.95	1.15	.24	.03	.00	2.79	.15	.06	.26	--	170	16						
						58	34	7	1		86	5	2	8									
MAD RIVER VALLEY																							
06/24/70 0940	1-08-20 05N/01E-04R04 5050	M	57.0F	7.7	430	--	--	--	--	--	--	--	--	--	--	--							
			13.9C																				
06/22/70 1645	06N/01E-07R01 5050 5050	M	65.0F	6.3	540	--	--	--	--	.0	246	--	16	--	--		233						
			15.5C	7.6	517					.00	4.93		.45		--								
06/22/70 1615	06N/01E-08R01 5050 5050	M	57.0F	6.1	205	--	--	--	--	.0	51	--	16	3.0	--	--		60					
			13.9C	7.5	204					.00	.84		.45	.05	--								
											376		201	22									

TABLE E-1 (CONTINUED)  
MINERAL ANALYSIS OF GROUND WATER  
NORTH COASTAL AREA

DATE TIME	SAMPLER LAB		TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	SAR	
.....																			
MAD RIVER VALLEY																			
CONTINUED																			
06/22/70 1705	5050	1-08.00 06N/01E-17001	M	56.0F 13.3C	6.3	435	--	--	--	--	--	--	--	--	--	--	--	--	
06/22/70 1720	5050	06N/01E-19001	M	58.0F 14.4C	6.5	375	--	--	--	--	--	--	--	--	--	--	--	--	
06/24/70 1015	5050	06N/01E-30N01	M	56.0F 13.3C	7.3	365	--	--	--	--	--	--	--	--	--	--	--	--	
06/24/70 0955	5050 5050	06N/01E-32F01	M	65.0F 18.3C	7.4 7.8	680 708	--	--	--	--	.0 .00	283 4.64 598	--	85 2.40 309	--	--	--	83	
06/22/70 1350	5050	06N/01W-01H01	M	60.0F 15.5C	6.1	190	--	--	--	--	--	--	--	--	--	--	--	--	
EUREKA PLAIN																			
06/23/70 0820	5050	1-09.00 04N/01W-08P01	M	55.0F 12.8C	7.7	155	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 1600	5050	04N/01W-16H01	M	57.0F 13.9C	7.5	500	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 0835	5050	04N/01W-17B01	M	55.0F 12.8C	7.1	165	--	--	--	--	--	--	--	--	--	--	--	--	
06/24/70 0800	5050 5050	05N/01E-18Q01	M	62.0F 16.7C	7.3 7.4	780 801	19 .95 11	14 1.15 14	143 6.22 73	5.7 .15 2	.0 .00	330 5.41 65	.0 .00	99 2.79 34	3.5 .06 1	1.20	468 450	104 165 18	
06/24/70 0835	5050	05N/01E-20Q01	M	55.0F 12.8C	6.3	270	--	--	--	--	--	--	--	--	--	--	--	--	
06/24/70 1045	5050 5050	05N/01W-29Q01	M	58.0F 14.4C	6.5 7.5	285 291	--	--	--	--	.0 .00	76 1.25 392	--	24 .68 213	31 .50 157	--	--	84	
EEL RIVER VALLEY																			
06/23/70 1200	5050	1-10.00 02N/01W-04U01	M	58.0F 14.4C	7.0	538	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 1250	5050 5050	02N/01W-07F01	M	54.0F 12.2C	7.1 7.9	460 472	--	--	--	--	.0 .00	194 3.14 614	--	24 .65 126	--	--	--	190	
06/23/70 1500	5050	02N/01W-12U04	M	62.0F 15.5C	7.6	157	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 0920	5050 5050	03N/01W-05K01	M	56.0F 13.3C	6.1 6.3	152 147	6.8 .34 24	5.4 .44 31	14 .61 43	1.1 .03 2	.0 .00	53 .87 66	2.3 .05 4	14 .39 30	.0 .00	.00	99 70	34 2 3	
06/23/70 1040	5050	03N/01W-18A01	M	59.0F 15.0C	7.0	470	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 1120	5050	03N/01W-30N01	M	57.0F 13.9C	6.5	545	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 1335	5050	03N/02W-32Q01	M	56.0F 13.3C	8.1	960	--	--	--	--	--	--	--	--	--	--	--	--	
06/23/70 1410	5050 5050	03N/02W-35M01	M	56.0F 13.3C	7.1 7.1	780 766	30 1.50 18	32 2.63 32	85 3.70 45	12 .31 4	.0 .00	308 5.05 63	34 .71 9	75 2.12 27	5.2 .04 1	.00	425 427	204 43 4	

TABLE E-1 (CONTINUED)

# MINERAL ANALYSIS OF GROUND WATER

## NORTH COASTAL AREA

DATE TIME	SAMPLER LAB	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE					MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TH NCH	SAR	
.....																		
ROUND VALLEY																		
05/21/70 0940	5050	1-11.00 22N/12W-06L02	M	59.0F 15.0C	7.5	450	--	--	--	--	--	--	--	--	--	--	--	--
05/20/70 1630	5050	22N/13W-01J03	M	63.0F 17.2C	7.2	228	--	--	--	--	--	--	--	--	--	--	--	--
05/20/70 1700	5050 5050	22N/13W-13401	M	62.0F 16.7C	7.0 7.8	220 237	19 .95 38	12 .99 40	12 .57 21	.8 .02 1	.0 .00 79	116 1.90 12	8.0 .25 10	2.5 .23 10	.40 .04 2	-- --	131 125	97 2 2
05/21/70 1020	5050 5050	23N/12W-33L03	M	60.0F 15.5C	7.1 8.6	595 597	--	--	--	--	18 .60 92	373 6.12 935	--	2.9 .08 12	--	--	--	291
05/21/70 0845	5050	23N/13W-25P01	M	57.0F 13.9C	7.1	235	--	--	--	--	--	--	--	--	--	--	--	--
05/21/70 0915	5050	23N/13W-36P03	M	60.0F 15.5C	6.8	250	--	--	--	--	--	--	--	--	--	--	--	--
DAYTONVILLE VALLEY																		
05/20/70 1350	5050 5050	1-12.00 21N/14W-30M01	M	59.0F 14.4C	6.3 8.2	205 204	--	--	--	--	.0 .00 836	114 1.87 836	--	8.4 .24 107	--	--	--	78
05/20/70 1520	5050 5050	21N/15W-01L02	M	62.0F 16.7C	7.4 8.0	415 433	47 2.35 48	20 1.64 33	20 .87 18	1.5 .04 1	.0 .00 92	268 4.40 1	1.3 .03 1	11 .31 7	1.1 .02	.40 --	244 236	198 21 2
05/20/70 1500	5050	21N/15W-12M02	M	56.0F 13.3C	5.5	55	--	--	--	--	--	--	--	--	--	--	--	--
LITTLE LAKE VALLEY																		
05/20/70 1210	5050 5050	1-13.00 18N/13W-08L01	M	58.0F 14.4C	6.1 7.9	280 282	--	--	--	--	.0 .00 786	148 2.43 786	--	6.9 .19 61	--	--	--	110
05/20/70 1250	5050 5050	18N/13W-20M03	M	55.0F 12.8C	6.1 7.8	222 220	--	--	--	--	.0 .00 850	125 2.05 850	--	4.0 .11 46	--	--	--	100

TABLE E-2  
TRACE ELEMENT ANALYSES OF GROUND WATER  
NORTH COASTAL AREA

State Well Number	Date	Constituents in parts per million							
		As	Cd	Cu	Fe (Total)	Pb	Mn	Se	Zn

BUTTE VALLEY (1-3.00)

46N-1W-6P1	7-6-70	0.00
46N-2W-16A2	7-6-70	0.00
48N-1W-28J1	7-6-70	0.00
48N-1W-36J1	7-6-70	0.01

SHASTA VALLEY (1-4.00)

43N-5W-2C1	7-7-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44N-5W-32C3	7-7-70	0.00							
44N-5W-34H1	7-7-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CONSTITUENTS

As	Arsenic	Fe	Iron	Se	Selenium
Cd	Cadmium	Pb	Lead	Zn	Zinc
Cu	Copper	Mn	Manganese		

THIS BOOK IS DUE ON THE LAST DATE  
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ARE SUBJECT TO RECALL AFTER ONE WEEK.  
RENEWED BOOKS ARE SUBJECT TO  
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